BULLETIN 168

LIST OF THE MARINE FISHES OF CANADA

BY

D. E. McALLISTER

1960

MA82
8C21b

NATIONAL MUSEUM OF CANADA
EPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCE

MA82
.8 C21b

SEP 2 0 1967

CANADA
DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES

NATIONAL MUSEUM OF CANADA
BULLETIN No. 168
Biological Series No. 62

LIST OF THE MARINE FISHES OF CANADA

By

D. E. McAllister

Issued under the authority of
The Honourable Alvin Hamilton, P.C., M.P.
Minister of Northern Affairs and National Resources
Ottawa

053107

1960

LIBRARY
NATIONAL MUSEUM
OF CANADA

Price, $1.25

75638-7—1

THE QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1960

Price $1.25 Cat. No. R93-168

CONTENTS

PAGE

Introduction 1
    Limits of the list 1
    Classification and nomenclature 1
    Arrangement of the list 1
    Distributional summary 2
    Acknowledgments 3
List 4
References 54
Index 64

ADDENDA

While this paper was in press, Dr. W. A. Clemens kindly communicated the following new records for the Pacific Coast of Canada:

Melanostomiatidae: *Aristostomias scintillans* (Gilbert) 1915—loosejaw (p. 14)

Myctophidae: *Ceratoscopelus townsendi* (Eigenmann & Eig.) 1889—fangtooth lanternfish (p. 15)
Lampanyctus ritteri Gilbert 1915—broadfin lanternfish (p. 16)

Sudidae: *Lestidium ringens* (Jordan and Gilbert) 1880—slender barracudina (p. 14)
Notolepis coruscans (Jordan and Gilbert) 1880—ribbon barracudina (p. 14)

Pleuronectidae: *Inopsetta ischyra* Jordan and Gilbert 1880—forkline sole (p. 49)
Embassichthys bathybius (Gilbert) 1890—deepsea sole (p. 49)

Scorpaenidae: *Sebastes dallii*=*Sebastes auriculatus* Girard 1854 (p. 39)

Cottidae: *Asemichthys taylori*=*Radulinus taylori* (Gilbert) 1912—spinynose sculpin (p. 44)

Stichaeidae: *Plectrobranchus evides* Gilbert 1898—black-and-white prickleback (p. 32)

LIST OF THE MARINE FISHES OF CANADA

INTRODUCTION

The three oceans bordering Canada have provided it with a varied and interesting fish fauna. It is the hope of the author that this list will help to stimulate further study of these faunas.

The last list of the marine fishes of Canada was published in 1913 by Andrew Halkett. Halkett's work included both freshwater and marine species. Freshwater species are omitted in this list, because they have already been covered by Scott (1958). Alaskan fishes might well have been included since they form a natural part of our faunas. However, Wilimovsky (1954) has compiled a checklist of the fishes of Alaska.

LIMITS OF THE LIST

The list includes all species of fishes recorded as occurring in the brackish and marine waters of Canada. In general, only fishes of the continental shelf and offshore fishing banks are listed.

CLASSIFICATION AND NOMENCLATURE

The classification follows Berg (1940) with some modifications. Subspecies are either omitted or discussed under the species heading. Species names usually follow the most recent revision. Where differences of opinion exist regarding taxonomy and nomenclature, both opinions are usually mentioned.

Common names usually follow the American Fisheries Society list of names (1948). Some names have been formulated or chosen in accordance with the Society's rules on common names given by Bailey (1955). Probably a new list of common names will soon be released by the Society and should be consulted.

ARRANGEMENT OF THE LIST

Names are listed alphabetically under the family or subfamily. The scientific name is followed by its author and date of publication, both of which have been checked with Jordan, Evermann, and Clark (1930) or the original sources. The date is followed by the common name, if any. If the ordinary common name does not conform to the specifications given by Bailey (1955), it is usually surrounded by parentheses.

General distribution of the species in Canada is indicated by three abbreviations: *Pac.*, *Arc.*, or *Atl.* *Pac.* means the species is found in the Pacific waters of British Columbia; *Arc.* in the Arctic Ocean from the Yukon-Alaska boundary east to Battle Harbour, Labrador (including Franklin District and Hudson Bay); and *Atl.*, Canadian Atlantic waters south of Battle Harbour, Labrador, south to the Canadian–United States border (including Browns Bank extending off southern Nova Scotia). More detailed distribution can be obtained from the list of authors under each species. An attempt is made to include references giving all the Canadian records. Where one work summarizes all the records, no other reference is cited.

Asterisks indicate introduced fish. Uncertain records are indicated by a query (?).

Although the author has been as careful as possible, mistakes have probably crept in. Differences of opinion exist on several of the taxons treated. Corrections and criticism would be most welcome.

DISTRIBUTIONAL SUMMARY

TABLE I

Number of Species in Different Regions

Endemic		Common		Total	
	No.		No.		No.
Pac.	236	Pac.-Arc.	5	Pac.	260
Arc.	36	Pac.-Atl.	12	Arc.	107
Atl.	181	Arc.-Atl.	58	Atl.	259
		Pac.-Arc.-Atl.	7		
Grand Total					535

The endemic, common, and total numbers of species are given for each ocean area. "Endemic" is used in a restricted sense, meaning not found in the other two ocean areas. "Common" species are those found in two or three ocean areas. "Total" number of species is the sum of the endemic and common species. These figures include the questionable species but not the introduced.

Pac. is relatively richer in total number species than Atl. (since Pac. has a smaller area). Pac. is also richer in endemic species and endemic families (e.g. Embiotocidae, Scytalinidae, Anoplopomidae, etc.). This richness might be attributed to more constant seasonal conditions of temperature, higher productivity, and lack of littoral ice-action in the Pacific.

The very low total and endemic numbers of species in the Arctic (especially considering its area) may be attributed to low temperatures and productivity, lack of macro-flora, and ice-action in the littoral zone.

It is immediately apparent that the Pacific shares fewer species with the Arctic than the Atlantic shares with the Arctic. This is still true even when the Alaskan fauna is considered. The narrowness of the Pacific connection to the Arctic Ocean, the past presence of the Bering land bridge, and the relative oceanographic dissimilarity of the Pacific and the Arctic (compared to the Arctic and Atlantic) doubtless account for this difference.

In the Pac., the most speciose family is Cottidae; in Arc., Cottidae; and in Atl., Gadidae.

ACKNOWLEDGMENTS

Dr. A. H. Leim generously supplied new records from a manuscript[1] and made helpful criticisms. The author is most grateful to Dr. N. J. Wilimovsky and to Dr. R. M. Bailey for extensive criticism of the manuscript. Dr. W. A. Clemens kindly supplied helpful comments and several new records from British Columbia. Dr. C. C. Lindsey made suggestions on the manuscript. Mr. F. C. Sawyer, librarian of the British Museum, provided information on the actual date of publication of Günther (1862). Mr. J. G. Hunter supplied the Arctic record of *Agonus acipenserinus* (Banks Island, N.W.T.). Mr. Teruya Uyeno, of University of Michigan, generously translated Japanese literature. My wife, Nancy A. McAllister, helped construct the index and did the typing. To all these persons the author is very grateful.

---

[1] Now published: A. H. Leim and L. R. Day. 1959. Records of uncommon and unusual fishes from eastern Canadian waters. J. Fish. Res. Bd. Canada 16(4):503-514, Aug. 1959.

LIST

PETROMYZONTIDAE—lampreys

Entosphenus japonicus (Martens) 1868—arctic lamprey. Arc.
Walters (1953a), (1955), Wynne-Edwards (1952).

Entosphenus tridentatus (Gairdner) 1836—Pacific lamprey. Pac.
Clemens and Wilby (1949), Pike (1951).

Lampetra ayresii (Günther) (1870)—western brook lamprey. Pac.

Vladykov and Follett (1958) have shown that the western brook lamprey, formerly thought to be identical with the European *Lampetra fluviatilis*, is actually a distinct species, *Lampetra ayresii*.

Vladykov and Follett (1958).

Petromyzon marinus Linnaeus 1758—sea lamprey. Atl.
Bigelow and Schroeder (1948), Schroeder (1955).

MYXINIDAE—hagfishes

Eptatretus stoutii (Lockington) 1878—Pacific hagfish. Pac.

Recently placed in *Polistotrema*. Now included in genus *Eptatretus* by Bigelow and Schroeder (1948). Clemens and Wilby (1949), Barraclough (1948).

Myxine glutinosa Linnaeus 1758—Atlantic hagfish. Atl.

Bigelow and Schroeder (1948), Halkett (1913), Vladykov (1951), Goode and Bean (1895), Nfld. Fish. Res. Comm. Rept. (1932).

HEXANCHIDAE—cow sharks

Hexanchus corinum Jordan and Gilbert 1880—sixgill shark. Pac.
Clemens and Wilby (1949). Formerly called *H. griseus.*

Notorhynchus cepedianus (Peron) 1807—sevengill shark. Pac.
Also referred to as *N. maculatus* Ayres.
Clemens and Wilby (1949).

LAMNIDAE—mackerel sharks

Alopias vulpinus (Bonnaterre) 1788—thresher shark. Pac., Atl.
Bigelow and Schroeder (1948), Clemens and Wilby (1949), Carl (1951).

Carcharodon carcharias (Linnaeus) 1758—great white shark. Atl.

It is probable that all accounts of this genus, whether Pacific or Atlantic, belong to a single species. Final conclusion awaits critical comparison of specimens (Bigelow and Schroeder (1948)).

Bigelow and Schroeder (1948), Day and Fisher (1954).

Cetorhinus maximus (Gunner) 1765—basking shark. Pac., Atl.

The relationship of Atlantic and Pacific specimens is uncertain and possibly there are several species in the genus (Bigelow and Schroeder (1948)).

Clemens and Wilby (1949), Bigelow and Schroeder (1948).

Lamna ditropis Hubbs and Follett 1947—salmon shark. Pac.

The Pacific form was considered conspecific with the Atlantic *Lamna nasus* Bonnaterre (also placed in the genus *Isurus*) until Hubbs and Follett recognized it as distinct.

Clemens and Wilby (1949) as *Isurus nasus,* Hubbs and Follett (1947).

Lamna nasus (Bonnaterre) 1788—Atlantic mackerel shark. Atl.

See remarks under preceding species.

Bigelow and Schroeder (1948), Jeffers (1932), Nfld. Fish. Res. Comm. Rept. (1933).

SCYLIORHINIDAE—cat sharks

Apristurus brunneus (Gilbert) 1891—brown cat shark. Pac.

Clemens and Wilby (1949).

CARCHARHINIDAE—blue sharks

Carcharhinus obscurus (Le Sueur) 1818—dusky shark. Atl.

Bigelow and Schroeder (1948).

Carcharias taurus Rafinesque 1810—ground shark. Atl.

Bigelow and Schroeder (1948).

Galeorhinus galeus (Linnaeus) 1758—soupfin shark. Pac.

According to Bigelow and Schroeder (1948), *G. zyopterus* Jordan and Gilbert is a synonym of *G. galeus.*

Clemens and Wilby (1949), Barraclough (1948a).

Mustelus canis (Mitchill) 1815—Atlantic smooth dogfish. Atl.

Bigelow and Schroeder (1948).

Prionace glauca (Linnaeus) 1758—great blue shark. Pac., Atl.

Clemens and Wilby (1949), Bigelow and Schroeder (1948), McKenzie and Homans (1937), Nfld. Fish. Res. Comm. Rept. (1932).

SPHYRNIDAE—hammerhead sharks

Sphyrna zygaena (Linnaeus) 1758—hammerhead. Atl.

Identity not certain because records may be either this species or *S. diplana* named in 1941.

Bigelow and Schroeder (1948), (1953a).

SQUALIDAE—dogfishes

Centroscyllium fabricii (Reinhardt) 1825—black dogfish. Atl.

Bigelow and Schroeder (1948), Ann. Rept. Fish. Res. Bd. Canada (1950), Schroeder (1955).

Centroscymnus coelolepis Bocage and Capello 1864—(Portuguese shark). Atl.

Bigelow and Schroeder (1948), Vladykov and McKenzie (1935).

Etmopterus princeps Collett 1904.—Atl.

Schroeder (1955).

Somniosus microcephalus (Bloch and Schneider) 1801—Greenland shark. Atl., Arc.

See note under following species.

Bigelow and Schroeder (1948), Backus (1957), Dunbar and Hildebrand (1952), Whiteaves (1886).

Somniosus pacificus Bigelow and Schroeder 1944—sleeper shark. Pac.

Bigelow and Schroeder (1944) separated the Pacific form from the Atlantic *S. microcephalus.*

Clemens and Wilby (1949) as *S. microcephalus,* Bigelow and Schroeder (1948).

Squalus acanthias Linnaeus 1758—spiny dogfish. Pac., Arc., Atl.

Bigelow and Schroeder (1948) believe the Pacific *S. suckleyi* Girard to be identical with *S. acanthias.* They also state that close or identical relatives exist in corresponding thermal belts of the Southern Hemisphere in the South Atlantic, South Pacific, Indian Ocean, and about South Africa.

Clemens and Wilby (1949) as *S. suckleyi,* Bigelow and Schroeder (1948), Backus (1957), Templeman (1944), Jeffers (1932), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934).

RAJIDAE—rays

Raja abyssicola Gilbert 1895—deepsea skate. Pac.

Clemens and Wilby (1949).

Raja binoculata Girard 1855—big skate. Pac.

Clemens and Wilby (1949).

Raja erinacia Mitchill 1825—little skate. Atl.

Bigelow and Schroeder (1953b), Stafford (1912).

Raja fyllae Lütken 1887—Atl.

Schroeder (1955), Bigelow and Schroeder (1953b).

Raja hyperborea Collett 1879—Arc.

Jensen (1948), Bigelow and Schroeder (1953b).

Raja jenseni Bigelow and Schroeder 1950—(Jensen's skate). Atl.

Bigelow and Schroeder (1953b) state that *R. jenseni* was first reported and discussed as *R. granulata* Bean. Their earlier reports of it were under that name; but it seems practically certain that the skate for which the specific name *granulata* was actually proposed and its figure given by its describers was actually *R. laevis.* Vladykov and McKenzie's (1935) record of *R. granulata* from continental edge off Halifax was *jenseni,* while the Le Havre Bank record was *R. laevis.*

Bigelow and Schroeder (1953b), Vladykov and McKenzie (1935), Schroeder (1955).

Raja kincaidii Garman 1908—black skate. Pac.

Clemens and Wilby (1949), Alverson (1951).

Raja laevis Mitchill 1817—barndoor skate. Atl.

See discussion under *jenseni.*

Bigelow and Schroeder (1953b), Vladykov and McKenzie (1935), in part, as *R. granulata,* Cornish (1912)? as *R. granulata,* Schroeder (1955), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934) as *R. stabuliformis.*

Raja mollis Bigelow and Schroeder 1950—Atl.

Bigelow and Schroeder (1953b), Schroeder (1955).

Raja ocellata Mitchill 1815—eyed skate. Atl.

Bigelow and Schroeder (1953b), Vladykov and McKenzie (1935) as *Raja diaphanes* Mitchill 1803, Needler (1940), Nfld. Fish. Res. Comm. Rept. (1932), (1933).

Raja radiata Donovan 1808—thorny skate. Arc., Atl.

According to Bigelow and Schroeder (1953b) *Raja scabrata* Garman of the west Atlantic is insufficiently distinguished from the eastern Atlantic *R. radiata* to be considered a separate species.

Needler (1940), Bigelow and Schroeder (1953b), Backus (1957), Vladykov (1933), and Jeffers (1932) as *R. scabrata,* Schroeder (1955), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Templeman and Fleming (1956).

Raja rhina Jordan and Gilbert 1880—longnose skate. Pac.

Clemens and Wilby (1949).

Raja senta Garman 1885—smooth skate. Atl.

Bigelow and Schroeder (1953b), Schmitt (1904), Schroeder (1955).

Raja spinicauda Jensen 1914—spinytailed skate. Atl.

May be expected in arctic Canada.

Bigelow and Schroeder (1953b), Ann. Rept. Fish. Res. Bd. Canada (1950), Schroeder (1955), Templeman and Fleming (1956).

Raja stellulata Jordan and Gilbert 1880—prickly skate. Pac.

Clemens and Wilby (1949).

TRYGONIDAE—sting rays

Dasyatis dipterurus (Jordan and Gilbert) 1880—rat-tailed sting ray. Pac.

Clemens and Wilby (1949).

TORPEDINIDAE—electric rays

Tetranarce californica (Ayres) 1855—Pacific electric ray. Pac.

I consider the "electric" ray to be a more descriptive name than the recommended "torpedo."

Clemens and Wilby (1949).

Torpedo nobiliana Bonaparte 1835—Atlantic electric ray. Atl.

Bigelow and Schroeder (1953b).

CHIMAERIDAE—chimaeras

Hydrolagus affinis (Capello) 1868—deepwater chimaera. Atl.

Vladykov and McKenzie (1935) list this species as *Chimaera monstrosa* (which inhabits northern European seas). Bigelow and Schroeder (1953b)

differentiate between *Hydrolagus affinis* and *Chimaera monstrosa.* A distinguishing adjective is desirable in the common name to separate them.
Bigelow and Schroeder (1953b).

Hydrolagus colliei (Lay and Bennett) 1839—ratfish. Pac.
Clemens and Wilby (1949).

RHINOCHIMAERIDAE

Harriotta raleighana Goode and Bean 1895—longnose chimaera. Atl.
Bigelow and Schroeder (1953b), Schroeder (1955).

Rhinochimaera atlantica Holte and Byrne 1909—Atl.
Schroeder (1955), Bigelow and Schroeder (1953b).

ACIPENSERIDAE—sturgeons

Acipenser brevirostris LeSueur 1818—shortnose sturgeon. Atl.
Dr. A. H. Leim (Pers. comm.).

Acipenser medirostris Ayres 1854—green sturgeon. Pac.
Clemens and Wilby (1949), Anonymous (1954).

Acipenser sturio Linnaeus 1758—Atlantic sturgeon. Arc., Atl.

It is still an open question whether the North American sturgeon, *A. oxyrhynchus* Mitchill 1814, is distinct from the European *A. sturio.*

Backus (1957), Vladykov (?), Bigelow and Schroeder (1953a), Cox (1921), Vladykov and Beaulieu (1946).

Acipenser transmontanus Richardson 1836—white sturgeon. Pac.
Clemens and Wilby (1949).

LEPISOSTEIDAE—gars

Lepisosteus osseus (Linnaeus) 1758—longnose gar. Atl.
Jean (1946).

MEGALOPIDAE—tarpons

Tarpon atlanticus (Valenciennes) 1847—tarpon. Atl.
Halkett (1913), Vladykov and McKenzie (1935), Bigelow and Schroeder (1953a).

ALBULIDAE

Albula vulpes (Linnaeus) 1758—bonefish. Atl.
Huntsman (1921).

CLUPEIDAE—herrings

Subfamily ALOSINAE

Alosa pseudoharengus (Wilson) 1811—alewife. Atl.

Livingstone (1951) considers the records of *A. aestivalis* (Mitchill) 1851 invalid.

Bigelow and Schroeder (1953a), Vladykov (1950), Halkett (1913), Ann. Rept. Fish. Res. Bd. Canada (1952), Needler (1940), Nfld. Fish. Res. Comm. Rept. (1933).

Alosa sapidissima (Wilson) 1811—shad. *Pac., Atl.

Clemens and Wilby (1949), Vladykov (1936), Bigelow and Schroeder (1953a), Vladykov (1950), Halkett (1913), Leim (1924), Schmitt (1904), Nfld. Fish. Res. Comm. Rept. (1933).

Brevoortia tyrannus (Latrobe) 1802—menhaden. Atl.

Bigelow and Schroeder (1953a).

Subfamily CLUPEINAE

Clupea harengus Linnaeus 1758—herring. Pac., Arc., Atl.

The herring of the Pacific has been regarded as a separate species, *Clupea pallasii* Valenciennes 1847. Svetovidov (1952), in a revision of the family, reduced the Pacific herring to a subspecies, *Clupea harengus pallasi* Valenciennes 1847, which occurs along the Pacific coast and eastward along the arctic coast to Bathurst Inlet, Canada. *Clupea harengus harengus* extends in North America from northern Labrador southward to Cape Hatteras.

Clemens and Wilby (1949), Svetovidov (1952), Walters (1955), Backus (1957), Bigelow and Schroeder (1953a), Nfld. Fish. Res. Comm. Rept. (1933), (1934), Schmitt (1904), Richardson (1836).

Sardinops caerulea (Girard) 1855—pilchard. Pac.

Svetovidov (1952) treats this as a subspecies of *S. sagax*.

Clemens and Wilby (1949).

Subfamily DUSSUMIERIINAE

Etrumeus sadina (Mitchill) 1815—Atlantic round herring. Atl.

Bigelow and Schroeder (1953a).

ENGRAULIDAE—anchovies

Anchoa hepsetus (Linnaeus) 1758—striped anchovy. Atl.

Bailey, Winn, and Smith (1954) discuss subspecific differentiation.

Bigelow and Schroeder (1953a).

Engraulis mordax Girard 1855—Pacific anchovy. Pac.

Clemens and Wilby (1949).

ALEPOCEPHALIDAE

Mitchillina bairdii (Goode and Bean) 1879—Atl.

Halkett (1913).

SALMONIDAE—salmon

Subfamily SALMONINAE

Oncorhynchus gorbuscha (Walbaum) 1792—pink salmon. Pac., Arc.

Clemens and Wilby (1949), Dymond (1940).

Oncorhynchus keta (Walbaum) 1792—chum salmon. Pac., Arc.

Clemens and Wilby (1949), Dymond (1940), Walters (1955).

Oncorhynchus kisutch (Walbaum) 1792—coho salmon. Pac.

Clemens and Wilby (1949).

Oncorhynchus nerka (Walbaum) 1792—sockeye salmon. Pac., Arc.?

Preble (1908) reported this species from the McKenzie. No arctic specimens exist, however.

Clemens and Wilby (1949).

Oncorhynchus tshawytscha (Walbaum) 1792—chinook salmon. Pac.

Clemens and Wilby (1949).

Salmo clarkii Richardson 1836—cutthroat trout. Pac.

Lindsey (1956) gives reasons for calling the sea-running cutthroat form *Salmo clarki clarki*. This subspecies should be given the common name coastal cutthroat.

Clemens and Wilby (1949).

Salmo gairdnerii Richardson 1836—steelhead or rainbow trout. Pac , *Atl.

Lindsey (1956a) discusses reasons for dropping subspecies.

Clemens and Wilby (1949), Dymond (1955).

Salmo salar Linnaeus 1758—Atlantic salmon. Arc., Atl.

Blair (1943, 1956, 1957), Lindsey and Thompson (1932), Nfld. Fish. Res. Comm. Rept. (1933), Dunbar and Hildebrand (1952), Backus (1957), Bigelow and Schroeder (1953a), Legendre and Rousseau (1949), Dymond (1941), Bean (1879), Schmitt (1904), Belding and Prefontaine (1938, 1938a, 1939).

***Salmo trutta** Linnaeus 1758—brown trout. *Pac., *Atl.

Clemens and Wilby (1949), Dymond (1955), Livingstone (1951).

Salvelinus alpinus (Linnaeus) 1758—arctic char. Arc., Atl.

Walters (1953a, 1953b, 1955), Günther (1877), (1877a), Halkett (1913), Soper (1935), (1928), Kelcher and Kooyman (1957), Sprules (1952), Henn (1932), Grainger (1953), Vladykov (1933), Hildebrand (1939), Anderson (1913), Dunbar and Hildebrand (1952), Andrew and Lear (1956), Backus (1957), Livingstone (1951), Harper (1948), Manning (1942), (1953), Dymond (1942), Dean and Douglas (1943), Pfaff (1937), Richardson (1836), Wakeham (1898), Ehrenbaum (1902), MacDonald (1953), Bean (1879).

Salvelinus fontinalis (Mitchill) 1815—brook char. Arc., Atl.

Hinks (1943), Livingstone (1951), Backus (1957), Bigelow and Schroeder (1953a), Dunbar and Hildebrand (1952), Vladykov (1933), Kelcher and Kooyman (1957), Jeffers (1932), Gordon and Backus (1957), Schmitt (1904).

Salvelinus malma (Wilbaum) 1792—dolly varden. Pac.

Clemens and Wilby (1949).

Salvelinus namaycush (Walbaum) 1792—lake char. Arc.

See Morton and Miller (1954) and Vladykov (1954) and (1959) regarding generic placement. Some authors place in *Cristivomer*.

Walters (1955), Dunbar and Hildebrand (1952), Backus (1957), Manning (1942), (1953), Vladykov (1954).

Subfamily Coregoninae

The taxonomy of this group has been in a state of some confusion. Literature concerning recent changes is given in Scott (1958).

Coregonus albula (Linnaeus) 1758—least herring. Arc., Atl.

Dymond (1943) showed that *Coregonus pusillus* Bean was a synonym of *Leucichthys sardinella.* Svärdson (1957) agrees with Walters (1955) that *artedii* and *sardinella* are conspecific. Svärdson further believes no valid difference exists between *artedii* and *sardinella* and the palearctic *albula.* Contrary to Dymond (1943), Svärdson does not find *autumnalis* close to *artedii.* Scott (1958) regards *tullibee* as a synonym of *artedii.* Thus the following may be considered synonyms of *Coregonus albula: pusillus, sardinella, artedii, tullibee.*

Walters (1953a), (1955), Dymond (1943), (1947), Hinks (1943), Dunbar and Hildebrand (1952), Dymond (1933), Svärdson (1957), Manning (1953), Vladykov (pers. comm.).

Coregonus clupeaformis (Mitchill) 1818—lake whitefish. Arc. Atl.

Hinks (1943), Dymond (1933), (1943), Walters (1955), Dr. A. H. Leim (pers. comm.).

Coregonus kennicotti Milner 1883—broad whitefish. Arc.

Dymond (1943), Walters (1953b), (1955), as *nasus.*

Coregonus oxyrhynchus (Linnaeus) 1758—lauretta herring. Arc.

Dymond (1943) showed that *laurettae* is synonymous with *autumnalis.* Svärdson (1957) considers *autumnalis* conspecific with *oxyrhynchus.* Walters (1953a), (1955), Dymond (1943).

Prosopium cylindraceum (Pallas) 1784—round whitefish. Arc., Atl.

Livingstone (1951) lists this species from the mouth of Sissbou River, Nova Scotia, which may have been in brackish water. Although the opportunity is great, it does not enter brackish waters in Labrador.

Walters (1955), Dymond (1933), Vladykov (pers. comm.).

Stenodus leucichthys (Güldenstadt) 1772—inconnu. Arc.

Berg (1932) and Dymond (1943) regard *S. leucichthys* as conspecific with *S. mackenzii,* reducing the latter to subspecies. Walters (1953a) revealed that there was little difference between nearctic and Siberian forms, hence the North American should be recognized as *S. l. nelma* (Pallas) 1773.

Walters (1953a), (1955), Dymond (1943).

OSMERIDAE—smelts

Hypomesus pretiosus (Girard) 1855—surf smelt. Pac.

The pond smelt, *Hypomesus olidus* (Pallas) 1811, has been reported only in fresh waters of arctic Canada (Walters 1955). As it occurs in brackish water elsewhere, one may expect it to occur in the Canadian Arctic.

Clemens and Wilby (1949).

Mallotus villosus (Müller) 1776—capelin. Pac., Arc., Atl.

Certain workers consider the Pacific form a separate species, *M. catervarius* (Pennant) 1784. Others term it a subspecies of *villosus: Mallotus villosus socialis* and the Atlantic form *Mallotus villosus villosus.*

Clemens and Wilby (1949), Schultz (1937), Walters (1955), Hildebrand (1939), Vladykov (1933), Vladykov and Tremblay (1955), Bigelow and Schroeder (1953a), Jeffers (1932), Dunbar and Hildebrand (1952), Backus (1957), Ehrenbaum (1902), Nfld. Fish. Res. Comm. Rept. (1933), (1934), Schmidt (1904), Richardson (1836), Sleggs (1933), Fowler (1948), Harper (1948), Dean and Douglas (1943), Pfaff (1937), Templeman (1948).

Osmerus eperlanus (Linnaeus) 1758—rainbow smelt. Arc.

Walters (1955) follows other workers in subspecific designation of this form as *Osmerus eperlanus dentex* (Steindachner) 1870.

Halkett (1913), Walters (1955), Wynne-Edwards (1952), Ehrenbaum (1902), Preble (1908).

Osmerus mordax (Mitchill) 1815—Atlantic smelt. Arc., Atl.

Backus (1957), Templeman, Squires, and Fleming (1957), Cornish (1912), Jeffers (1932), Vladykov and Tremblay (1935), McKenzie (1943), Bigelow and Schroeder (1953a), Schmitt (1904), Nfld. Fish. Res. Comm. Rept. (1932), (1933).

Spirinchus dilatus Schultz and Chapman 1934—longfin smelt. Pac.

Clemens and Wilby (1949).

Thaleichthys pacificus (Richardson) 1836—eulachon. Pac.

Clemens and Wilby (1949).

ARGENTINIDAE—argentines

Hubbs, C. L. (1953) places Macropinnidae in Argentinidae and synonymizes Bathylagidae with Argentinidae.

Argentina silus Ascanius 1763—argentine. Atl.

Vladykov and McKenzie (1935), Halkett (1913), McKenzie (1939a), McKenzie and Homans (1937), Cohen (1958), Schroeder (1955), Nfld. Fish. Res. Comm. Rept. (1933).

Argentina striata Goode and Bean 1895—Atl.

Cohen (1956), Schroeder (1955).

Macropinna microstoma Chapman 1939—barrel-eye. Pac.

Clemens and Wilby (1949).

Bathylagus benedicti Goode and Bean 1895—Atl.

Ann. Rept. Fish. Res. Bd. Canada (1955).

Bathylagus milleri Jordan and Gilbert 1898—bigscaled blacksmelt. Pac.

Clemens and Wilby (1949). May=*B. alascanus.*

Bathylagus pacificus Gilbert 1890—slender blacksmelt. Pac.

Clemens and Wilby (1949). May=*B. alascanus.*

Leuroglossus stilbius Gilbert 1890—Smoothtongue Pac.

Cohen (1956).

ESOCIDAE—pikes

Esox lucius Linnaeus 1758—northern pike. Arc.
Dunbar and Hildebrand (1952).

STERNOPTYCHIDAE

Subfamily GONOSTOMATINAE—anglemouths

Gonostomatidae was reduced to a subfamily of Sternoptychidae by Hubbs, C. L. (1953).

Cyclothone microdon (Günther) 1878—veiled anglemouth. Pac., Arc., Atl.
Clemens and Wilby (1949), Jensen (1948), Lütken (1899).

Cyclothone signata Garman 1899—cyclothone. Atl.
Bigelow and Schroeder (1953a), Dannevig (1919).

Gonostoma denudatum Rafinesque 1810—Atl.
Ann. Rept. Fish. Res. Bd. Canada (1952).

Maurolicus pennanti (Walbaum) 1792—pearlsides. Atl.
Andriashev (1954) calls this species *Maurolicus mülleri* (Gmëlin).
Bigelow and Schroeder (1953a).

Subfamily STERNOPTYCHINAE—hatchetfishes

Argyropelecus aculeatus Valenciennes 1850—silver hatchetfish. Atl.
Bigelow and Schroeder (1953a); Vladykov and McKenzie (1935) and Halkett (1913) as *A. olfersi* according to Schultz (1938).

Argyropelecus sladeni Regan 1908—silvery hatchetfish. Pac.
Barraclough and Waldichuk (1954), Barraclough (1956).

Sternoptyx diaphana Hermann 1781—Atl.
Wilimovsky (1951) gives correct generic spelling.
Halkett (1913).

STOMIATIDAE

Bathophilus flemingi Aron and McCrery 1958—Pac.
Aron and McCrery (1958).

Borostomias sp.—Atl.
Ann. Rept. Fish. Res. Bd. Canada (1957).

Echiostoma sp.—Atl.
Ann. Rept. Fish. Res. Bd. Canada (1955).

Grammatostomias sp.—Atl.
Ann. Rept. Fish. Res. Bd. Canada (1952).

Stomias boa (Risso) 1810—stomias. Atl.

Ege (1934) and Jensen (1948) divide the species into *S. b. boa* and *S. b. ferox* (Reinhardt). It is the latter form which occurs off our coasts. Bigelow and Schroeder (1953a) give *ferox* specific value. However, overlap occurs, and Jensen's data (1948) show a cline so that it is not certain that even subspecific distinction is justified. Occurs on Greenland side of Davis Strait; has not yet been recorded from Canadian side of the Strait.

Bigelow and Schroeder (1953a), Goode and Bean (1895), Halkett (1913), Ann. Rept. Fish. Res. Bd. Canada (1953), (1951).

Stomioides nicholsi Parr 1933—Atl.

Bigelow and Schroeder (1953a).

Tactostoma macropus Bolin 1939—arrowfish. Pac.

Chapman (1939) described this species shortly after Bolin, as *Photonectops multipunctata.*

Clemens and Wilby (1949).

CHAULIODONTIDAE—viperfishes

Chauliodus macouni Bean 1890—fanged viperfish. Pac.

Clemens and Wilby (1949), Barraclough and Waldichuk (1954), Barraclough (1954).

Chauliodus sloani Schneider 1801—viperfish. Atl.

Bigelow and Schroeder (1953a), Ann. Rept. Fish. Res. Bd. Canada (1955), (1951).

MELANOSTOMIATIDAE (*See* addenda, p. iv)

Malacosteus niger Ayres 1849—Atl.

Ann. Rept. Fish. Res. Bd. Canada (1957).

IDIACANTHIDAE

Idiacanthus fasciola Peters 1876—Atl.

Ann. Rept. Fish. Res. Bd. Canada (1957).

SCOPELARCHIDAE

Neoscopelarchoides dentatus Chapman 1939—pearleye. Pac.

Clemens and Wilby (1949).

SUDIDAE (PARALEPIDIDAE) (*See* addenda, p. iv)

Paralepis brevis Zugmayer 1911—Atl.

Ann. Rept. Fish. Res. Bd. Canada (1957).

Paralepis rissoi Bonaparte 1840—Arc., Atl.

Ege (1930, 1953) reviews the genus. Lütken believed that the *P. borealis* figured by Krøyer was a new species. Lütken called the new species *krøyeri.* Parr (1928) showed that *krøyeri* was merely a subspecies of

R. rissoi Bonaparte. The date of publication of *P. rissoi* Bonaparte, which is not given in the original work or in any other references I have examined, was obtained from Salvadori (1888).

Dunbar and Hildebrand (1939), Steele (1957), Jensen (1942), Ann. Rept. Fish. Res. Bd. Canada (1951, 1955), Nfld. Fish. Res. Comm. Rept. (1933), Ege (1953).

ALEPISAURIDAE—lancetfishes

Alepisaurus aesculapius Bean 1882—handsaw fish. Pac.

See discussion under following species.

Clemens and Wilby (1949) as *Alepidosaurus*.

Alepisaurus ferox Lowe 1833—lancetfish. Atl.

Jensen (1948) and Schultz (1936) apparently regard the Pacific and Atlantic forms as identical and term them both *A. ferox*. According to Clemens and Wilby (1949) *A. aesculapius* has 30 to 40 dorsal rays and 15 to 17 anal rays, while *A. ferox*, according to Jensen (1948) and Bigelow and Schroeder (1953a), has 41 to 44 dorsal rays and 9 to 11 (14 or 15 in Bigelow and Schroeder's illustration) anal rays. As the dorsal rays, at least in the present stage of knowledge, provide separation, I choose to regard them as separate species. Further study may reveal only subspecific distinctness. Jensen (1948) and Halkett (1913) place this species in the genus *Plagyodus*.

Bigelow and Schroeder (1953a), Halkett (1913), Vladykov and McKenzie (1935).

Bathytroctes homopterus Vaillant 1888—Atl.

Ann. Rept. Fish. Res. Bd. Canada (1953).

Xenodermichthys copei (Gill) 1884—Atl.

Ann. Rept. Fish. Res. Bd. Canada (1952).

ANOTOPTERIDAE

Anotopterus pharao Zugmayer 1911—Pac., Atl.

Ann. Rept. Fish. Res. Bd. Canada (1955), Hubbs, Mead, and Wilimovsky (1953), Taylor (1959).

MYCTOPHIDAE—lanternfishes

Family partly reviewed by Bolin (1939) and Fraser-Brunner (1949).

Subfamily MYCTOPHINAE

Benthosema glaciale (Reinhardt) 1837—glacier lanternfish. Arc., Atl.

Fraser-Brunner removed this species from the genus *Myctophum* and placed it in *Benthosema*.

Dunbar and Hildebrand (1952), Jensen (1948), Nfld. Fish. Res. Comm. Rept. (1932), (1934), Ann. Rept. Fish. Res. Bd. Canada (1953).

Ceratoscopelus madeirensis (Lowe) 1839—Atl.

Halkett (1913). (*See* addenda, p. iv)

Genus *Diaphus*

Subgenus *Lamprossa*

Diaphus effulgens (Goode and Bean) 1895—headlight fish. Atl.

Bigelow and Schroeder (1953a), Goode and Bean (1895).

Subgenus *Diaphus*

Diaphus theta Eigenmann and Eigenmann 1890—whitespotted lanternfish. Pac.

Clemens and Wilby (1949) call this species *Diaphus rafinesquii* (spelled *rafinesquei* originally).

Genus *Lampadena*

Lampadena braueri Zugmayer 1914—Atl.

Dr. A. H. Leim (Pers. comm.).

Genus *Electrona*

Electrona arctica (Lütken) 1892—bigeye lanternfish. Pac.

Fraser-Brunner (1949) synonymized *thompsoni* with *arctica.*

Clemens and Wilby (1949).

Genus *Gonichthys*

Gonichthys cocco (Cocco) 1829—Atl.

Halkett (1913) referred to this as *Rhinoscopelus coccoi.*

Halkett (1913).

Genus *Lampanyctus* (*See* addenda, p. iv).

Subgenus *Lepidophanes*

? **Lampanyctus guentheri** Goode and Bean 1895—Atl.

Fraser-Brunner (1949) gives distribution as Southern Atlantic, Indian and Pacific oceans. He does not include North Atlantic.

Halkett (1913), Goode and Bean (1895).

Subgenus *Lampanyctus*

Lampanyctus crocodilus (Risso) 1810—jewel lanternfish. Arc., Atl.

Halkett (1913) as *L. gemmifer* Goode and Bean 1895.

Halkett (1913), Dunbar and Hildebrand (1952).

Lampanyctus leucopsarus (Eigenmann and Eigenmann) 1890—smallfin lanternfish. Pac.

Clemens and Wilby (1949).

Lampanyctus regalis (Gilbert) 1891—pinpoint lanternfish. Pac.

Clemens and Wilby (1949).

Genus *Myctophum*

Subgenus *Myctophum*

Myctophum affine (Lütken) 1892—Atl.

Gibbs (1957) points out that *nitidulum,* formerly regarded as synonymous with *affine,* is distinct. The specimens he studied were from south of our area so it is not known whether one or both occur in Canadian waters. The fact that the distribution of the two species in the area Gibbs studied was very similar suggests that both will be found in Canadian waters.

Bigelow and Schroeder (1953a), Dannevig (1919)?

Myctophum punctatum Rafinesque 1810—(common lanternfish). Arc., Atl.

Fraser-Brunner records this species only from the Mediterranean and Pacific.

Vladykov and McKenzie (1935) whose illustration differs from Fraser-Brunner's, Kielhorn (1952), Goode and Bean (1895), Halkett (1913).

Subgenus *Scopelus*

Myctophum californiense Eigenmann and Eigenmann 1889—bigfin lanternfish. Pac.

Clemens and Wilby (1949).

Myctophum humboltii (Risso) 1810—Atl.

Dr. A. H. Leim (Pers. comm.).

Genus *Notoscopelus*

Notoscopelus castaneus Goode and Bean 1895—Atl.

Halkett (1913) as *Macrostoma castaneum.*

Notoscopelus elongatus (Costa) 1844—Pac., Atl.

Halkett (1913) as *Macrostoma quercinum* (= *N. resplendens*?).

Notoscopelus margaritifer Goode and Bean 1895—pearly lanternfish. Atl.

Vladykov and McKenzie (1935), Jordan, Evermann, and Clark (1930).

Genus *Tarletonbeania*

Tarletonbeania crenularis (Jordan and Gilbert) 1880—blue lanternfish. Pac.

Wisner (1959), Clemens and Wilby (1949).

Tarletonbeania taylori Mead 1953—Pac.

Wisner (1959).

SACCOPHARYNGIDAE

Saccopharynx ampullaceus (Harwood) 1827—Arc.

Bean (1879) as *S. flagellum.*

EURYPHARYNGIDAE

Eurypharynx pelecanoides Vaillant 1882—Atl.

Halkett (1913), Grey (1956).

CYPRINIDAE—minnows

Mylocheilus caurinum Richardson 1836—peamouth chub. Pac.

Carl and Clemens (1953), and 1957 unpub. record by S. Quadri, Spanish Banks, Vancouver, B.C.

ANGUILLIDAE

Anguilla rostrata (LeSueur) 1817—American eel. Arc., Atl.

Bailey (1957a) has placed a proposal before the International Commission on Zoological Nomenclature to use the plenary powers to retain *Anguilla* *rostrata* and synonymize *Anguilla bostoniensis*, which was chosen by the first revisor, Günther (1860), but which has not gained common preference. Andriashev (1954) considers *rostrata* to be a subspecies of *A. anguilla.*

Backus (1957), Cornish (1912), Jeffers (1932), Vladykov (?), Bigelow and Schroeder (1953a), Schmitt (1904).

CONGRIDAE—congers

Conger oceanica (Mitchill) 1818—conger eel. Atl.

Dr. A. H. Leim (Pers. comm.).

MURAENIDAE—morays

Gymnothorax funebris Ranzani 1840—green moray. Atl.

Dr. A. H. Leim (Pers. comm.).

SIMENCHELYIDAE

Simenchelys parasiticus Gill 1879—slime eel. Atl.

According to Bigelow and Schroeder (1953a), this species is represented by a very close relative in Japanese waters.

Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), Goode and Bean (1895), Schroeder (1955).

SYNAPHOBRANCHIDAE

Synaphobranchus kaupii Johnson 1862—longnosed eel. Arc., Atl.

Bigelow and Schroeder (1953a) call this species *S. pinnatus* (Gronow) 1854. According to Jensen *pinnatus* Günther (non Gronow-Gray)=*kaupii.* Jensen in a footnote states that Bruun proved Günther had not demonstrated any identity between *Muraena pinnata* Gronow-Gray and *Synaphobranchus kaupii* Johnson. *M. pinnata* was so poorly defined that it should be "cut out" altogether as unrecognizable (=*nomen nudum*) while *S. kaupii* should remain as type for genus and family (Jensen, 1948).

Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), Ehrenbaum (1902), Ann. Rept. Fish. Res. Bd. Canada (1953), Schroeder (1955).

NEMICHTHYIDAE

Avocettina gilli (Bean) 1890—Pacific snipe eel. Pac.

Clemens and Wilby (1949).

Nemichthys avocetta Jordan and Gilbert 1880—thread fish. Pac.

Clemens and Wilby (1949).

Nemichthys scolopaceus Richardson 1848—Atlantic snipe eel. Atl.

Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), Halkett (1913).

Serrivomer beanii Gill and Ryder 1883—Atl.

Ann. Rept. Fish. Bd. Canada (1957).

NOTACANTHIDAE

Macdonaldia rostrata (Collett) 1889—Atl.

Halkett (1913), Goode and Bean (1895), Ehrenbaum (1902), Ann. Rept. Fish. Res. Bd. Canada (1953), Schroeder (1955) as *Polyacanthonotus rostratus.*

Notacanthus chemnitzi Bloch 1787—spiny eel. Atl.

McKenzie (1940), Ann. Rept. Fish. Res. Bd. Canada (1950), (1952).

Notacanthus phasganorus Goode 1881—swordtail eel. Atl.

Halkett (1913), McKenzie (1939a), Schroeder (1955).

SCOMBERESOCIDAE

Cololabis saira (Brevoort) 1850—Pacific saury. Pac.

Clemens and Wilby (1949).

Scomberesox saurus (Walbaum) 1792—Atlantic saury. Atl.

Bigelow and Schroeder (1953a), Halkett (1913), Johansen (1926b), Dymond (1928), (1931), Cox (1921), Needler (1940), Nfld. Fish. Res. Comm. Rept. (1932), (1933).

HEMIRHAMPHIDAE—halfbeaks

Hyporhamphus unifasciatus (Ranzani) 1842—halfbeak. Atl.

Dr. A. H. Leim (Pers. comm.)

EXOCOETIDAE—flying fishes

Cypselurus furcatus (Mitchill) 1815—fourwing flyingfish. Atl.

Halkett (1913) and Bigelow and Schroeder (1953a) record unverifiable records of flying fishes. Dr. A. H. Leim (Pers. comm.).

GADIDAE—cods

Antimora rostrata (Günther) 1878—longfinned cod. Pac., Atl.

Antimora viola Goode and Bean 1878 is conspecific with *A. rostrata. A. rostrata* was named in July and *viola* in November of 1878; *rostrata* has priority.

Clemens and Wilby (1949), Vladykov and McKenzie (1935), Bigelow and Schroeder (1953a), Schroeder (1955).

Arctogadus pearyi (Nichols and Maxwell) 1933—Canadian Arctic cod. Arc.

Walters (1953a) believes that Pfaff's data for *Boreogadus saida* from Fury and Hecla Strait indicate *Arctogadus* sp. in the sample and that *A. pearyi* may be conspecific with *A. glacialis* (Peters).

Walters (1953a), (1955).

Boreogadus saida (Lepechin) 1774—Arctic cod. Arc., Atl.

Walters (1953a) indicates that Pfaff's data for *Boreogadus saida* includes *Arctogadus* sp. Walters (1955) discusses subspecies.

Walters (1953a), (1955), Backus (1957), Dunbar and Hildebrand (1952), Hildebrand (1939), Vladykov (1933), Grainger (1953), Vladykov (1945), Jensen (1948), Günther (1877), (1877a), as *Gadus fabricii* Richardson, Halkett (1928), Svetovidov (1948), Ehrenbaum (1902), McKenzie (1953), Richardson (1836), Bean (1879), Soper (1935), Dunbar (1947), Harper (1948)?, Pfaff (1937), Jensen (1910).

Brosme brosme (Müller) (1776)—cusk. Atl.

Bigelow and Schroeder (1953a), Schroeder (1955).

Elginus navaga (Pallas) 1814—saffron cod. Arc.

Arctic specimens bridge between Atlantic European *E. navaga* and Pacific *E. gracilis.* Walters (1955) reduces these to subspecies and calls the arctic Canadian form *E. navaga navaga.*

Walters (1953a), (1955), Wynne-Edwards (1952), Pfaff (1937).

Enchelyopus cimbrius (Linnaeus) 1766—four-bearded rockling. Atl.

Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935) as *cimbricus,* Jeffers (1932), Svetovidov (1948), Vladykov and Tremblay (1935), Goode and Bean (1895) in genus *Rhinonemus,* Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Dannevig (1919).

Ficus chesteri (Goode and Bean) 1878—longfinned hake. Atl.

Svetovidov (1948) retains this species in *Phycis,* although some authors place it in *Urophycis.* Whitley (1955) points out that *Phycis* is preoccupied but that *Ficis* is available.

Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), Goode and Bean (1895), Schroeder (1955).

Gadus morhua Linnaeus 1758—cod. Pac., Arc., Atl.

Gadus morhua has been often referred to in the literature as *Gadus callarias* Linnaeus 1758. These names were published on the same page and are conspecific. The first revisor, Günther (1862), recognized they were conspecific and selected *G. morhua* over *G. callarias.* This action and the selection of *morhua* as the type of *Gadus* and the placement of *morhua* on the "Official List of Specific Trivial Names in Zoology" clearly make *G. morhua* the proper name for the common cod of the Atlantic. *G. morhua* has been incorrectly emended to *G. morrhua* by some authors.

The Pacific cod, *Gadus macrocephalus* has been reduced to a subspecies of *Gadus morhua* by Svetovidov (1948).

The Greenland cod, *Gadus ogac,* has also been reduced to a subspecies of *Gadus morhua* by Svetovidov (1948). Vladykov (1945) and Jensen (1948) believed *ogac* and *morhua* distinct species and gave characters to separate them. Moreover the two species are sympatric over a large area (Ungava to Nova Scotia) (a fact that Svetovidov was not cognizant of according to his distribution map). It seems, therefore, that the two forms are specifically distinct and they are so treated here.

Walters (1955) presented data showing that the characters which have been used to separate *ogac* from *Gadus morhua marisalbi* of the White Sea are insufficient to provide separation. If on comparison of specimens of these two forms, no distinguishing characters can be found; and if *marisalbi* is truly a subspecies of *morhua*, then *ogac* must also be considered a subspecies of *morhua*. That is even if a form acts as a species at one end of its distribution but as a subspecies at the other end, it must be considered a subspecies.

Clemens and Wilby (1949), Ketchen (1950), (1955), Forrester (1954), Backus (1957), Vladykov (1933), Bigelow and Schroeder (1953a), Dunbar and Hildebrand (1952), Hildebrand (1939), Jefferson (1932), Schmitt (1904), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Templeman, Squires, and Fleming (1957), Needler (1940), Dannevig (1919), Thompson (1943).

Gadus ogac Richardson 1836—Greenland cod. Arc., Atl.

Walters (1953a), Hinks (1943), Vladykov (1933), Jensen (1948), Backus (1957), Dunbar and Hildebrand (1952), Hildebrand (1939), Vladykov (1945), Johansen (1925), Scott (1952), Nfld. Fish. Res. Comm. Rept. (1934), McKenzie (1952), Pfaff (1937), Richardson (1836), Ross (1935), Kendall (1909).

Gaidropsarus argenteus (Reinhardt) 1838—silvery rockling. Arc.

Ann. Rept. Fish. Res. Bd. Canada (1957).

Gaidropsarus ensis (Reinhardt) 1838—three-bearded rockling. Arc., Atl.

Bigelow and Schroeder (1953a), Jensen (1948), Schroeder (1955), Grey (1956).

Gaidropsarus vulgaris (Yarrell) 1836—Arc.

Hubbs (1955), Svetovidov (1948).

Lota lota (Linnaeus) 1758—burbot. Arc.

Lindsey (1956a) demonstrated that a cline in the characters had been used for subspecific differentiation. Hence subspecific separation is not justifiable.

Walters (1955), (1953a), Lindsey (1956a), Preble (1908), Simpson (1843), Vladykov (1949).

Melanogrammus aeglefinus (Linnaeus) 1758—haddock. Atl.

Jensen (1948) places this in *Gadus*.

Bigelow and Schroeder (1953a), Needler (1931), Templeman, Squires, and Fleming (1957), Jefferson (1932), Svetovidov (1948), Needler (1930), Schmitt (1904), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Schroeder (1955), Dannevig (1919), Thompson (1939).

Merluccius bilinearis (Mitchill) 1814—silver hake. Atl.

McKenzie and Scott (1956), Bigelow and Schroeder (1953a), Templeman, Squires, and Fleming (1957), Svetovidov (1948), Johansen (1926b), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Schroeder (1955).

Merluccius productus (Ayres) 1855—Pacific hake. Pac.

Clemens and Wilby (1949), Svetovidov (1948).

Microgadus proximus (Girard) 1855—Pacific tomcod. Pac.

According to Walters (1955), Anderson's (1913) records of the species are actually *Elginus* sp.

Clemens and Wilby (1949).

Microgadus tomcod (Walbaum) 1792—Atlantic tomcod. Arc., Atl.

Backus (1957) regards *Microgadus* Gill as a synonym of *Gadus* Linnaeus. Svetovidov (1948) retains *Microgadus*.

Bigelow and Schroeder (1953a), Backus (1957), Vladykov and McKenzie (1935), Templeman, Squires, and Fleming (1957), Jeffers (1932), Vladykov and Tremblay (1935), Needler (1940).

Micromesistius poutassou (Risso) 1810—Atl.

Schroeder (1955).

Molva molva (Linnaeus) 1758—European ling. Atl.

Templeman and Fleming (1954), Jensen (1948), Svetovidov (1948), Schmitt (1904), Ann. Rept. Fish. Res. Bd. Canada (1955).

Pollachius virens (Linnaeus) 1758—pollack. Arc., Atl.

Backus (1957), Bigelow and Schroeder (1953a), Templeman, Squires, and Fleming (1957), Jensen (1948), Svetovidov (1948), Schroeder (1955), Nfld. Fish. Res. Comm. Rept. (1932), (1933), Wakeham (1898).

Theragra chalcogrammus (Pallas) 1814—whiting. Pac.

Wilimovsky (1954), following Svetovidov (1948), gives as *T. c. chalcogramma;* northern B.C. forms fit in that subspecies; *T. c. fucensis* occurs southward. Whiting is considered a preferable common name to walleye pollack.

Clemens and Wilby (1949), Svetovidov (1948).

Urophycis chuss (Walbaum) 1792—squirrel hake. Atl.

Vladykov and McKenzie (1935) considered this species and *U. tenuis* to be conspecific (from literature study). Bigelow and Schroeder consider them distinct. Old records may be confused with *tenuis.*

Bigelow and Schroeder (1953a), Svetovidov (1948), Vladykov and Tremblay (1935)?, Schroeder (1955), Nfld. Fish. Res. Comm. Rept. (1932).

Urophycis regius (Walbaum) 1792—spotted hake. Atl.

Bigelow and Schroeder (1953a), Svetovidov (1948), Nfld. Fish. Res. Comm. Rept. (1932).

Urophycis tenuis (Mitchill) 1815—mud hake. Atl.

See *U. chuss.* It is uncertain whether Cornish's (1912) records contain *U. chuss* or *U. tenuis* or both.

Templeman, Squires, and Fleming (1957), Bigelow and Schroeder (1953a), Svetovidov (1948), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Schroeder (1955), Needler (1940).

MACROURIDAE—grenadiers

Chalinura filifera Gilbert 1895—filamented grenadier. Pac.

Clemens and Wilby (1949).

Chalinura murrayi (Günther) 1878—Atl.

Ann. Rept. Fish. Res. Bd. Canada (1955), Grey (1956).

Chalinura occidentalis (Goode and Bean) 1885—straptailed grenadier. Atl.

Vladykov and McKenzie (1935), Goode and Bean (1895).

Coelorhynchus carminatus (Goode) 1880—longnosed grenadier. Atl.

Bigelow and Schroeder (1953a).

Coryphaenoides rupestris Gunner 1765—rock grenadier. Atl.

Andriashev (1954) places it in *Macrourus*, rather than *Coryphaenoides*.

Vladykov and McKenzie (1935), Halkett (1913), Goode and Bean (1895), Ann. Rept. Fish. Res. Bd. Canada (1953), Schroeder (1955).

Dolloa cyclolepis (Gilbert) 1895—smoothscaled grenadier. Pac.

Smooth might be a preferable adjective to smoothscaled.

Clemens and Wilby (1949).

Macrourus acrolepis Bean 1883—roughscaled grenadier. Pac.

Wilimovsky (1954) places it in *Coryphaenoides*. Günther and most authors use the "corrected" spelling *Macrurus*. Rough might be a preferable adjective to roughscaled.

Clemens and Wilby (1949).

Macrourus bairdii Goode and Bean 1877—marlin-spike. Atl.

Grey (1956) places this species in the genus *Nezumia*.

Vladykov and McKenzie (1935), Bigelow and Schroeder (1953a), Vladykov and Tremblay (1935), Goode and Bean (1895), Cox (1921), Nfld. Fish. Res. Comm. Rept. (1934), McKenzie (1939a), Schroeder (1955).

Macrourus berglax Lacépède 1802—rough-head grenadier. Arc., Atl.

Jensen (1948) did not use the name *berglax* (although it has priority), because Lacépède adopted the name *berglax* from Ström in the belief that Ström's *"Berglax"* is the present species, while it was actually *Coryphaenoides rupestris*. Jensen would therefore use *M. fabricii* Sundevall 1840. There is no nomenclatural significance in Lacépède's interpreting as "Berglax" that species referred to by Ström. Lacépède correctly described and named the species, and the name *berglax* is valid even though it referred to another species in the vernacular.

Bigelow and Schroeder (1953a), Hildebrand (1939), Schroeder (1955), Templeman and Fleming (1956), Nfld. Fish. Res. Comm. Rept. (1932).

Macrourus holotrachys Günther 1878—Atl.

Halkett (1913).

Nematonurus armatus (Hector) 1875—Arc.

Lütken (1899), Grey (1956).

GASTEROSTEIDAE—sticklebacks

Apeltes quadracus (Mitchill) 1815—bloody stickleback. Atl.

Vladykov and McKenzie (1935), Bigelow and Schroeder (1953a), Cox (1923), Needler (1940).

Eucalia inconstans (Kirtland) 1841—brook stickleback. Arc.

Cox (1922), Vladykov (1933).

Gasterosteus aculeatus Linnaeus 1758—threespine stickleback. Pac., Arc., Atl.

There are two forms in North America, one marine and one freshwater.

Clemens and Wilby (1949), Dunbar and Hildebrand (1952), Backus (1957), Bigelow and Schroeder (1953a), Halkett (1913), Cox (1922), Hildebrand (1939), Hourston and Herlinveaux (1957), Vladykov (1933), Cornish (1912), Jeffers (1932), Halkett (1928), Johansen (1926), Cox (1921), Bean (1879), Soper (1935), Needler (1940), Dannevig (1919), Richardson (1836), Nfld. Fish. Res. Comm. Rept. (1932), (1933).

Gasterosteus wheatlandi Putnam 1867—Atl.

The nature of this species, close to *aculeatus*, should be investigated in the light of Heut's (1947) work. *G. bispinosus johanseni* Cox 1923 is a synonym.

Bigelow and Schroeder (1953a), Johansen (1926), Cox (1921), (1923a), Richardson (1836), Kendall (1909).

Pungitius pungitius (Linnaeus) 1758—ninespine stickleback. Arc., Atl.

Formerly placed in genus *Pygosteus*. Walters (1955) calls this form *Pungitius p. pungitius.*

Walters (1953a), (1955), Vladykov and McKenzie (1935), Backus (1957), Bigelow and Schroeder (1953a), Dunbar and Hildebrand (1952), Cox (1922), Hildebrand (1939), Vladykov (1933), Sprules (1952), Stafford (1912), Halkett (1913), (1928), Needler (1940), Pfaff (1937), Nfld. Fish. Res. Comm. Rept. (1932).

AULORHYNCHIDAE

Aulorhynchus flavidus Gill 1861—tubesnout. Pac.

Clemens and Wilby (1949).

FISTULARIIDAE

Fistularia tabacaria Linnaeus 1758—trumpetfish. Atl.

Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), Ann. Rept. Fish. Res. Bd. Canada (1952).

SYNGNATHIDAE

Subfamily SYNGNATHINAE—pipefishes

Syngnathus fuscus Storer 1839—northern pipefish. Atl.

Syngnathus fuscus and *S. peckianus* refer to the same species and were published simultaneously. Storer recognized that they were conspecific and later selected *peckianus* as the name for the species, thus acting as first reviser. As the name *fuscus* has had wide usage and as *peckianus* has been relatively little used, Bailey (1957a) has requested the International Commission on Zoological Nomenclature to reject *peckianus* in favour of *fuscus.*

Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), Cox (1921), Needler (1940), as *Siphostoma fuscum,* Nfld. Fish. Res. Comm. Rept. (1932).

Syngnathus griseolineatus Ayres 1854—Pacific pipefish. Pac.

Clemens and Wilby (1949).

Subfamily HIPPOCAMPINAE—seahorses

Hippocampus hudsonius DeKay 1842—seahorse. Atl.

Bigelow and Schroeder (1953a), Halkett (1913), Ann. Rept. Fish. Res. Bd. Canada (1952), Nfld. Fish. Res. Comm. Rept. (1932), Whiteheaves (1886).

LAMPRIDAE—opahs

Lampris regius (Bonnaterre) 1788—opah. Pac., Atl.

Clemens and Wilby (1949), Bigelow and Schroeder (1953a).

TRACHYPTERIDAE

Trachypterus rexsalmonorum Jordan and Gilbert 1894—king-of-the-salmon. Pac.

Clemens and Wilby (1949).

CYPRINODONTIDAE—topminnows

Fundulus diaphanus (LeSueur) 1817—banded killifish. Atl.

Subspecies usually given as *F. d. diaphanus.*

Livingstone (1951), Vladykov and Tremblay (1935), Cornish (1912)?, Cox (1921), Ann. Rept. Fish. Res. Bd. Canada (1952).

Fundulus heteroclitus (Linnaeus) 1766—mummichug. Atl.

Subspecies usually given as *F. h. macrolepidotus* (Walbaum). However, Brown (1957) indicates the characters to be clinal and feels this subspecies should not be recognized.

Bigelow and Schroeder (1953a), Livingstone (1951), Stafford (1912), Cox (1921), Cornish (1912), Needler (1940).

POLYMIXIIDAE

Polymixia nobilis Lowe 1838—Atl.

Ann. Rept. Fish. Res. Bd. Canada (1955).

DIRETMIDAE

Diretmus argenteus Johnson 1863—Atl.

Ann. Rept. Fish. Res. Bd. Canada (1957).

CARISTIIDAE

Caristius macropus (Bellotti) 1903—false fanfish. Pac.

Welander, Alverson, and Bergman (1957).

MELAMPHAIDAE—melamphids

Melamphaes beanii (Günther) 1887—Atl.

Goode and Bean (1895).

Melamphaes lugubris Gilbert 1891—highsnout melamphid. Pac.

Clemens and Wilby (1949). Formerly *M. cavernosus.*

Melamphaes rugosus Chapman 1939—crested melamphid. Pac.
Clemens and Wilby (1949).

ZEIDAE

Zenopsis ocellata (Storer) 1858—American John Dory. Atl.
Bigelow and Schroeder (1953a).

SPHYRAENIDAE—barracudas

Sphyraena argentea Girard 1855—barracuda. Pac.
Clemens and Wilby (1949).

MUGILIDAE—mullets

Mugil cephalus Linnaeus 1758—striped mullet. Atl.
Bigelow and Schroeder (1953a).

ATHERINIDAE—silversides

Menidia menidia (Linnaeus) 1766—Atlantic silversides. Atl.

Bigelow and Schroeder (1953a) give reasons for not recognizing subspecies. Vladykov and McKenzie record as *M. notata* (Mitchill) 1815.

Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), Cox (1921), Needler (1940).

SERRANIDAE—bass

Epinephelus morio (Valenciennes) 1828—red grouper. Atl.
Vladykov and McKenzie (1935).

Polyprion americanus (Bloch and Schneider) 1801—wreckfish. Atl.
Bigelow and Schroeder (1953a).

Roccus americanus (Gmelin) 1789—white perch. Atl.

Bailey (1956) and Bailey, Winn, and Smith (1954) give reasons for generic placement of this species.

Bigelow and Schroeder (1953a), Halkett (1913), Johansen (1926b).

Roccus saxatilis (Walbaum) 1792—striped bass. Atl.

See references above *re* generic name.

Bigelow and Schroeder (1953a), Needler (1940).

APOGONIDAE

Rhectogramma sherborni Norman 1930—Atl.
Ann. Rept. Fish. Res. Bd. Canada (1956).

LATILIDAE (BRANCHIOSTEGIDAE)—blanquillos

Lopholatilus chamaeleonticeps Goode and Bean 1879—tilefish. Atl.
Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935).

POMATOMIDAE—bluefishes

Pomatomus saltatrix (Linnaeus) 1758—bluefish. Atl.
Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935)?.

CARANGIDAE—jacks

Caranx crysos (Mitchill) 1815—bluerunner. Atl.
Bigelow and Schroeder (1953a).

Caranx hippos (Linnaeus) 1766—jack or crevalle (common jack). Atl.
Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935).

Decapterus macarellus (Cuvier) 1833—mackerel scad. Atl.
Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), McKenzie (1940).

Naucrates ductor (Linnaeus) 1758—pilotfish. Atl.
Bigelow and Schroeder (1953a), Ann. Rept. Fish. Res. Bd. Canada (1933), (1955).

Selene vomer (Linnaeus) 1758—lookdown. Atl.

Bailey (1957a) has placed a proposal before International Commission on Zoological Nomenclature to use its plenary powers to retain the generic name *Selene* since it has been frequently used; whereas *Argyreiosus,* though it was selected by the first reviser (Günther 1860), has been little used.

Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), Halkett (1913).

Seriola zonata (Mitchill) 1815—banded rudderfish. Atl.
Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), Halkett (1913), Ann. Rept. Fish. Res. Bd. Canada (1955).

Trachurops crumenophthalmus (Bloch) 1793—bigeye shad. Atl.
Bigelow and Schroeder (1953a).

Trachurus symmetricus (Ayres) 1855—horse-mackerel. Pac.

Roedel and Fitch (1952) found *Decapterus polyaspis* a synonym of this species.

Clemens and Wilby (1949).

Vomer setapinnis (Mitchill) 1815—moonfish. Atl.
Bigelow and Schroeder (1953a), Ann. Rept. Fish. Res. Bd. Canada (1952).

BRAMIDAE—sea breams

Brama raii (Bloch) 1791—pomfret. Pac., Atl.
Pinckard (1957), Clemens and Wilby (1949), Bigelow and Schroeder (1953a), Andriashev (1954).

Taractes longipinnis (Lowe) 1843—(Johnson's sea bream). Atl.

Mead (1957) synonymizes *T. princeps* and several other names, with *T. longipinnis.*

Bigelow and Schroeder (1953a).

CORYPHAENIDAE—dolphins

Coryphaena hippurus Linnaeus 1758—dolphin. Atl.
Vladykov and McKenzie (1935), Bigelow and Schroeder (1953a).

SCIAENIDAE—weakfishes

Cynoscion nobilis (Ayres) 1860—white sea bass. Pac.
Clemens and Wilby (1949).

Cynoscion regalis (Bloch and Schneider) 1801—weakfish. Atl.
Bigelow and Schroeder (1953a), Ann. Rept. Fish. Res. Bd. Canada (1955).

Genyonemus lineatus (Ayres) 1855—king croaker. Pac.
Clemens and Wilby (1949).

SPARIDAE—porgies

? Archosargus probatocephalus (Walbaum) 1792—sheepshead. Atl.
Bigelow and Schroeder (1953a) consider this record unlikely.
Huntsman (1921).

Stenotomus versicolor (Mitchill) 1815—northern scup. Atl.
Ann. Rept. Fish. Res. Bd. Canada (1955).

MULLIDAE

Mullus auratus Jordan and Gilbert 1882—red goatfish. Atl.
Vladykov and McKenzie (1935).

CHAETODONTIDAE—butterfly fishes

Chaetodon ocellatus Bloch 1787—(common butterflyfish). Atl.
Vladykov and McKenzie (1935).

HISTIOPTERIDAE—boarfishes

Pseudopentaceros richardsoni (Smith) 1849—boarfish. Pac.
Dr. W. A. Clemens (Pers. comm.).

EMBIOTOCIDAE—sea perches

Recently revised by Tarp (1952).

Subfamily AMPHISTICHINAE

Amphistichus rhodoterus (Agassiz) 1854—porgy. Pac.
Holoconotus, in which this species was placed, was synonymized with *Amphistichus* by Tarp (1952).
Clemens and Wilby (1949).

Hyperprosopon argenteum Gibbons 1854—walleye seaperch. Pac.
Clemens and Wilby (1949).

Subfamily EMBIOTOCINAE

Cymatogaster aggregata Gibbons 1854—yellow shiner. Pac.

Originally written properly as *aggregata,* in feminine, since the Greek generic name was feminine; subsequently and incorrectly written in masculine (Tarp, 1952).

Clemens and Wilby (1949), Hourston and Herlinveaux (1957).

Brachyistius frenatus Gill 1862—kelp perch. Pac.

As Günther named this species *Ditrema brevipinne* in the same year, and some authors followed Günther and some Gill, an attempt was made to discover which author's name had priority. According to Gill (1892) *Brachyistius frenatus* was originally published on June 24, 1862. This is partly confirmed by the date on which the Smithsonian Institution acknowledged receipt (this is after the date of publication)—1 August 1862—given in Index to the Proc. Acad. Nat. Sci. Phila. 1817 to 1910. The actual date of publication of Günther's work could not be found, although the title page bore the year 1862 and the preface was dated June 15, 1862. Personal communication with F. C. Sawyer, librarian of the British Museum, gave the following indication. Günther's 4th volume was "laid on the table" of the trustees (a preliminary to public issue) on November 8, 1862. This clearly shows that Gill's name has priority over that of Günther. Tarp (1952) places this species in *Micrometrus.* Hubbs and Hubbs (1954) give reasons for its generic separation as *Brachyistius.*

Clemens and Wilby (1949).

Embiotoca lateralis Agassiz 1854—blue seaperch. Pac.

Until recently, placed in genus *Taeniotoca.*

Clemens and Wilby (1949).

Phanerodon furcatus Girard 1855—white seaperch. Pac.

Clemens and Wilby (1949).

Rhacochilus vacca (Girard) 1855—dusky seaperch. Pac.

Tarp (1952) synonymized *Damalichthys* with *Rhacochilus.*

Clemens and Wilby (1949).

LABRIDAE—wrasses

Tautoga onitis (Linnaeus) 1758—tautog. Atl.

Bigelow and Schroeder (1953a), Halkett (1913).

Tautogolabrus adspersus (Walbaum) 1792—cunner. Atl.

Bigelow and Schroeder (1953a), Johansen (1925a), Reid (1929), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Dannevig (1919).

TRICHODONTIDAE

Trichodon trichodon (Tilesius) 1811—sandfish. Pac.

Clemens and Wilby (1949).

BATHYMASTERIDAE—ronquils

Bathymaster signatus Cope 1783—searcher. Pac.

Clemens and Wilby (1949).

Ronquilus jordani (Gilbert) 1888—ronquil. Pac.
Clemens and Wilby (1949).

CHIASMODONTIDAE—swallowers

Chiasmodon niger Johnson 1863—black swallower. Atl.
Halkett (1913), Bigelow and Schroeder (1953a), Ann. Rept. Fish. Res. Bd. Canada (1933).

ANARHICHADIDAE—wolf-fishes

Anarhichas denticulatus Krøyer 1844—blue wolf-fish or broadhead wolf-fish. Arc., Atl.

According to Walters (1953b) two forms are currently assigned to this species. Andriashev (1954) places in *Lycichthys.* According to Jensen (1948), *A. latifrons* Steenstrup and Hallgrimsson 1842 is a *nomen nudem,* and hence the fish must be called *A. denticulatus.*

Walters (1953b), (1955), Vladykov and McKenzie (1935), Backus (1957), Ann. Rept. Fish. Res. Bd. Canada (1950), McKenzie (1940), Dannevig (1919), Templeman and Fleming (1956).

Anarhichas lupus Linnaeus 1758—striped wolf-fish (Atlantic wolf-fish). Arc., Atl.

Bigelow and Schroeder (1953a), Cornish (1912), Jeffers (1932), Cox (1921), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Schmitt (1904), Templeman and Fleming (1956).

Anarhichas minor Olafsen 1774—spotted wolf-fish. Atl.

On Greenland side but not yet recorded from Canadian side of Davis strait (although it occurs farther south).

Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), Jensen (1948), Nfld. Fish. Res. Comm. Rept. (1934), Ann. Rept. Fish. Res. Bd. Canada (1950), McKenzie (1939a), Templeman and Fleming (1956).

Anarrhichthys ocellatus Ayres 1855—wolfeel (Pacific wolf-fish). Pac.
Clemens and Wilby (1949).

CLINIDAE—kelpfishes

Eastern Pacific forms revised by Clark Hubbs (1952).

Gibbonsia metzi Hubbs 1927—striped kelpfish. Pac.

According to Clark Hubbs (1952), our form is *G. m. metzi* Hubbs, C. L. (which=Clemens and Wilby 1949 in part).

Clemens and Wilby (1949), Clark Hubbs (1952).

Gibbonsia montereyensis Hubbs 1927—spotted kelpfish. Pac.

Clark Hubbs (1952) terms this subspecies *G. m. vulgaris* Clark Hubbs 1952. This subspecies encloses another subspecies, *G. m. montereyensis,* within its range in California.

Clemens and Wilby (1949), Clark Hubbs (1952).

? **Heterostichus rostratus** Girard 1855—window kelpfish. Pac.

B.C. specimens are supposedly of the subspecies *H. r. rostratus.*

Halkett (1913), Roedel (1953), Clark Hubbs (1952).

STICHAEIDAE—northern blennies (*See* addenda, p. iv).

This family has been revised by Makushok (1958)

Subfamily Stichaeinae

Eumesogrammus praecisus (Krøyer) 1837—fourlined snakeblenny. Arc., Atl.

Walters (1953a), (1955), Backus (1957), Dunbar and Hildebrand (1952), Vladykov (1933), Jensen (1944), Halkett (1913).

Stichaeus punctatus (Fabricius) 1780—Arctic shanny (spotted snakeblenny). Arc., Atl.

According to Walters (1955) there is no support for subspecific separation.

Walters (1955), Backus (1957), Bigelow and Schroeder (1953a), Vladykov (1933), Jeffers (1932), Halkett (1913), Jensen (1944), Ehrenbaum (1902), Cox (1921), Dannevig (1919), Dunbar (1947)?.

Ulvaria subbifurcata (Storer) 1839—radiated shanny. Atl.

Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), Jeffers (1932), McKenzie (1939a), Nfld. Fish. Res. Comm. Rept. (1932).

Subfamily Chirolophinae

? **Chirolophis ascanii** (Walbaum) 1792—Arc., Atl.

Dannevig (1919), Dunbar (1947), Rept. Nfld. Fish. Res. Comm. (1933), (1934), as *C. galerita* (Linnaeus) 1766.

Chirolophis nugator (Jordan and Williams) 1895—ornamented blenny. Pac.

Clemens and Wilby (1949).

Chirolophis polyactocephalus (Pallas) 1814—decorated blenny. Pac.

Clemens and Wilby (1949).

Subfamily Lumpeninae—eelblennies

Allolumpenus hypochromus Hubbs and Schultz 1932—Y-blenny. Pac.

Clemens and Wilby (1949).

Leptoclinus maculatus (Fries) 1837—shanny. Arc., Atl.

Bigelow and Schroeder (1953a), Backus (1957), Dunbar and Hildebrand (1952), Jensen (1944), Halkett (1913), Vladykov and Tremblay (1935), Nfld. Fish. Res. Comm. Rept. (1932), (1933).

Lumpenella longirostris (Evermann and Goldsborough) 1907—long-snouted blenny. Pac.

Clemens and Wilby (1949).

Lumpenus fabricii Reinhardt 1836—Greenland blenny. Arc., Atl.

Vladykov (1933), Jensen (1944), Halkett (1913), Gordon and Backus (1957), Ehrenbaum (1902), Schmitt (1904).

Lumpenus lampretaeformis (Walbaum) 1792—snakeblenny. Arc., Atl.

Backus (1957) does not support Vladykov's (1935) division into subspecies (*americanus*—Gulf of St. Lawrence and *terraenovae*—Newfoundland).

Andriashev (1954) refers the American form to *L. lampretaeformis serpentinus* (Storer). Andriashev (1954) explains incorrect spelling *lumpretaeformis.* Backus (1957), Bigelow and Schroeder (1953a), Jensen (1944), Andriashev (1954), Gordon and Backus (1957), Vladykov and Tremblay (1935), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Dunbar (1947).

Lumpenus medius (Reinhardt) 1838—stout eelblenny. Arc.

Walters (1955), Backus (1957).

Lumpenus sagitta Wilimovsky 1956—eelblenny. Pac.

Wilimovsky (1956) showed that *L. anguillaris* and its apparent synonym *L. gracilis* were both preoccupied, and proposed the name *sagitta* to replace them.

Clemens and Wilby (1949).

Poroclinus rothrocki Bean 1890—whitebarred blenny. Pac.

Clemens and Wilby (1949).

Subfamily ALECTRIINAE

Anoplarchus purpurescens Gill 1861—crested blenny. Pac.

Apparently this is the typical subspecies.

Clemens and Wilby (1949).

Subfamily XIPHISTERINAE—belted blennies

Phytichthys chirus (Jordan and Gilbert) 1880—belted blenny. Pac.

Wilimovsky (1954) lists an Alaskan subspecies.

Clemens and Wilby (1949).

Xiphister atropurpureus (Kittlitz) 1858—black blenny. Pac.

Clemens and Wilby (1949).

Xiphister mucosus (Girard) 1858—rock blenny (rock blenny-eel). Pac.

Clemens and Wilby (1949).

PHOLIDAE

Subfamily PHOLINAE

Pholis fasciata (Bloch and Schneider) 1801—tissy. Arc.

Vladykov (1933), Jensen (1942), Backus (1957), Gordon and Backus (1957), Bean (1879).

Pholis gunnellus (Linnaeus) 1758—gunnel. Arc., Atl.

Backus (1957), Bigelow and Schroeder (1953a), Stafford (1912), Jeffers (1932).

Pholis laeta (Cope) 1873—bracketed blenny. Pac.

Clemens and Wilby (1949).

Pholis ornata (Girard) 1855—saddled blenny. Pac.

Clemens and Wilby (1949).

Subfamily APODICHTHYINAE

Apodichthys flavidus Girard 1855—penpoint blenny. Pac.

Clemens and Wilby (1949).

Xererpes fucorum (Jordan and Gilbert) 1880—fucus blenny. Pac.
Clemens and Wilby (1949).

CRYPTACANTHODIDAE

Cryptacanthodes maculatus Storer 1839—Atlantic wrymouth. Arc., Atl.
Bigelow and Schroeder (1953a), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Dannevig (1919).

Delolepis gigantea Kittlitz 1858—Pacific wrymouth. Pac.
Clemens and Wilby (1949).

Lyconectes aleutensis Gilbert 1895—red devil. Pac.
Clemens and Wilby (1949).

ZOARCIDAE—eelpouts

Aprodon corteziana Gilbert 1890—bigfinned eelpout. Pac.
Clemens and Wilby (1949).

Bothrocara molle Bean 1890—softfinned eelpout. Pac.
Most authors employ the incorrect gender—*B. mollis.*
Clemens and Wilby (1949) in part, Bayliff (1959).

Furcimanus diapterus (Gilbert) 1891—blackfined eelpout. Pac.
Andriashev (1954) places in genus *Lycodes* and divides into subspecies, ours being the typical.
Clemens and Wilby (1949).

Gymnelis viridis (Fabricius) 1780—unernak. Arc., Atl.
Walters (1953a?, 1953b, 1955), Vladykov (1933), Dunbar and Hildebrand (1952), Hildebrand (1939), Vladykov and Tremblay (1935), Backus (1957), Günther (1877), (1877a), Vladykov and McKenzie (1935), MacDonald (1953), Bean (1879).

Lycenchelys verrillii (Goode and Bean) 1877—Jimmy Durante eelpout
Halkett (1913), Vladykov and McKenzie (1935), Schroeder (1955).

Lycenchelys sarsii (Collett) 1871—Atl.
Ann. Rept. Fish. Res. Bd. Canada (1952).

Lycenchelys verrillii (Goode and Bean) 1877—Jimmy Durante eelpout (wolf eel). Atl.
Halkett (1913), Bigelow and Schroeder (1953a), Ann. Rept. Fish. Res. Bd. Canada (1955), (1956).

Lycocara parii (Ross) 1826—Arc.
Halkett (1913), Ehrenbaum (1902), Bean (1879), Richardson (1836).

Lycodapus fierasfer Gilbert 1890—pearly eelpout. Pac.
May be conspecific with *L. mandibularis.*
Clemens and Wilby (1949), Bayliff (1959).

Lycodapus mandibularis Gilbert 1915—pale eelpout. Pac.
Clemens and Wilby (1949), Alverson (1951), Bayliff (1959).

Gymnelopsis stigma (Lay and Bennett) 1839—Arc.

Walters (1955) as *Ophidium stigma,* Halkett (1913) as *Gymnelis stigma.*

Lycodes agnostus Jensen 1901—Atl.

Vladykov and Tremblay (1935).

Lycodes atratus Vladykov and Tremblay 1936—Atl.

Vladykov and Tremblay (1936).

Lycodes brevipes Bean 1890—shortfinned eelpout. Pac.

Some authors divide into subspecies. *L. jugoricus* may occur in arctic Canada (Walters, 1955).

Clemens and Wilby (1949).

Lycodes esmarki Collett 1875—(Esmark's eelpout). Atl.

Bigelow and Schroeder (1953a), Goode and Bean (1895).

Lycodes frigidus Collett 1878—Atl.

Schroeder (1955), Grey (1956).

Lycodes lavalaei Vladykov and Tremblay 1936—Arc., Atl.

Backus (1957), Ann. Rept. Fish. Res. Bd. Canada (1950).

Lycodes mucosus Richardson 1855—(Richardson's eelpout). Arc.

Andriashev (1954) lists a Russian subspecies.

Walters (1955), Halkett (1913), Vladykov (1933) as *Lycodalepis* sp.?

Lycodes palearis Gilbert 1895—wattled eelpout. Pac.

This form is the typical subspecies.

Walters (1955), Clemens and Wilby (1949), Bayliff (1959).

Lycodes pallidus Collett 1879—Arctic pale eelpout. Arc.

Andriashev (1954) considers the North American form the typical subspecies.

Walters (1953b), (1955), Backus (1957), Gordon and Backus (1957).

Lycodes reticulatus Reinhardt 1836—reticulated eelpout. Arc., Atl.

Dunbar and Hildebrand (1952) indicate that their specimens belonged to the typical *reticulatus* subspecies and not to *L. r. hacheyi* set up by Vladykov (1933).

Backus (1957), Bigelow and Schroeder (1953a), Hildebrand (1939), Dunbar and Hildebrand (1952), Vladykov (1933), Goode and Bean (1895) as *L. perspicillum,* Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934).

Lycodes terraenovae Collett 1896—Atl.

Jordan, Evermann, and Clark (1930), Vladykov and Tremblay (1936).

Lycodes turneri Bean 1878—polar eelpout. Arc., Atl.

Andriashev (1954) terms this species *Lycodes polaris* (Sabine) 1824, but according to Walters (1955) the description of *L. polaris* is incomplete; no figure is given and the type specimen could not be found. Vladykov and Tremblay (1936) consider *Blennius polaris* (=*Lycodes*) a *nomen nudum.*

Walters (1953a), (1955), Backus (1957), Vladykov and Tremblay (1935) as *L. agnostus.*

Lycodes vachonii Vladykov and Tremblay 1936—Atl.
Vladykov and Tremblay 1936.

Lycodes vahlii Reinhardt 1838—(Vahl's eelpout). Atl.
Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), Ehrenbaum (1902).

Lycodopsis pacifica (Collett) 1879—blackbellied eelpout. Pac.
Clemens and Wilby (1949), Bayliff (1959).

Macrozoarces americanus (Bloch and Schneider) 1801—eelpout (ocean pout). Arc. Atl.
Backus (1957), Bigelow and Schroeder (1953a), Cornish (1912), Jeffers (1932), Halkett (1913), Vladykov and Tremblay (1935), Clemens and Clemens (1921), Schmitt (1904), Templeman and Fleming (1956), Nfld. Fish. Res. Comm. Rept. (1932).

Melanostigma gelatinosum Günther 1881—Atl.
Ann. Rept. Fish. Res. Bd. Canada (1955).

PTILICHTHYIDAE—quillfishes

Ptilichthys goodei Bean 1881—quillfish. Pac.
Clemens and Wilby (1949).

DEREPODICHTHYIDAE—cuskpouts

Derepodichthys alepidotus Gilbert 1895—cuskpout. Pac.
Clemens and Wilby (1949).

SCYTALINIDAE—burrowing blennies

Scytalina cerdale Jordan and Gilbert 1880—burrowing blenny. Pac.
Clemens and Wilby (1949).

ZAPRORIDAE (inc. sedis)—prowfishes

Zaprora silenus Jordan 1896—prowfish. Pac.
Clemens and Wilby (1949).

BROTULIDAE—brotulids

Brosmophycis marginata (Ayres) 1854—red brotulid. Pac.
Clemens and Wilby (1949).

AMMODYTIDAE—sandlances

Because of nomenclatural confusion, some records of *Ammodytes* cannot be assigned with certainty to the proper species. *Ammodytes marinus* and *A. americanus* appear inseparable from *A. hexapterus*.

Walters' (1953a) *A. tobianus* equals *A. hexapterus*.

Vladykov (1933) named *A. dubius hudsonius* from Hudson Bay. Since data on vertebral counts are lacking, it cannot be ascertained whether *A. hexapterus* and/or *A. dubius* were included in his sample.

A. tobianus personatus from the Pacific coast fits neither *hexapterus,* nor *dubius* nor *marinus*. For the moment *A. personatus* is accorded specific distinction.

Ammodytes dubius Reinhardt 1838—(sandlance). Arc.

Bigelow and Schroeder (1953a), Backus (1957), Pfaff (1937) at least in part, Dunbar and Hildebrand (1952)?.

Ammodytes hexapterus Pallas 1814—(sandlance). Arc., Atl.

Walters (1953a), (1955), Bigelow and Schroeder (1953a), Backus (1957), Grainger (1953)?, Hildebrand (1939)?, Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Needler (1940), Sprules (1952)?.

Ammodytes personatus Girard 1856—(sandlance). Pac.

Clemens and Wilby (1949).

GEMPYLIDAE

Escolar violaceus (Bean) 1887—oilfish. Atl.

Vladykov and McKenzie (1935), Ann. Rept. Fish. Res. Bd. Canada (1951).

Ruvettus pretiosus Cocco 1829—escolar. Atl.

Bigelow and Schroeder (1953a).

TRICHIURIDAE

Benthodesmus simonyi (Steindachner) 1891—frostfish. Pac., Atl.

Clemens and Wilby (1949), Halkett (1913). Formerly *B. atlanticus.*

SCOMBRIDAE—mackerels

Fraser-Brunner (1950) unites Cybiidae with Scombridae. Godsil (1954) favours retention of Thunnidae and Katsuwonidae until classification is clarified which motion I do not follow. Some of the species of *Thunnus* below are divided into two or three species by Ginsburg (1953).

Auxis thazard (Lacépède) 1802—frigate mackerel. Atl.

Ann. Rept. Fish. Res. Bd. Canada (1955).

Euthynnus pelamis (Linnaeus) 1758—skipjack. Pac., Atl.

Fraser-Brunner (1950) reduces the genus *Katsuwonus,* in which this species was formerly placed, to a subgenus and includes it in the genus *Euthynnus.*

Clemens and Wilby (1949), Ann. Rept. Fish. Res. Bd. Canada (1955).

Sarda chiliensis (Cuvier) 1832—Pacific bonito. Pac.

Godsil (1955) discusses genus *Sarda.* He synonymizes *lineolata* with *chiliensis* and suggests that *chiliensis* itself may be a synonym of *sarda* (of the Atlantic).

Clemens and Wilby (1949).

Sarda sarda (Bloch) 1793—Atlantic bonito. Atl.

Godsil (1955) suggests that *S. chiliensis* of the Pacific may be conspecific with this species.

Bigelow and Schroeder (1953a), Halkett (1913), McKenzie (1939a).

Scomber japonicus Houttuyn 1782—chub mackerel. Pac., Atl.

Specimens from eastern Pacific were originally termed *Pneumatophorus diego,* which has been synonymized with this species by Fraser-Brunner. Bigelow and Schroeder (1953a) have termed the Atlantic specimens *Pneumatophorus colias.* Matsubara (1955) believes that Fraser-Brunner included a second species in his *Scomber japonicus,* which Matsubara calls *S. tapeinocephalus* Bleeker. As Californian specimens at the University of Michigan key out to *S. japonicus,* it is likely that the species occurring off British Columbia is *S. japonicus,* but this should be checked. Godsil (1954) retains *Pneumatophorus diego.*

Clemens and Wilby (1949), Bigelow and Schroeder (1953a), Schmitt (1904), Ann. Rept. Fish. Res. Bd. Canada (1952).

Scomber scombrus Linnaeus 1758—Atlantic mackerel. Arc., Atl.

Backus (1957), Bigelow and Schroeder (1953a), Cornish (1912), Jeffers (1932), Sparks (1929), Cox (1921), Schmitt (1904), Needler (1940), Dannevig (1919), Nfld. Fish. Res. Comm. Rept. (1932, 1933).

Thunnus alalunga (Gmelin) 1788—albacore. Pac., Atl.

Clemens and Wilby (1949), Vladykov (1935), Partlo (1955).

Thunnus saliens Jordan and Evermann 1926—Pac.

Dr. W. A. Clemens (Pers. comm.)

Thunnus thynnus (Linnaeus) 1758—bluefin tuna. Arc., Atl.

T. secundodorsalis (Storer) is a synonym.
Bigelow and Schroeder (1953a), Stafford (1912), Halkett (1913), Schmitt (1904).

ISTIOPHORIDAE (HISTIOPHORIDAE)—sailfishes

Makaira albida (Poey) 1860—white marlin. Atl.

Bigelow and Schroeder (1953a), McKenzie (1939a).

Makaira herschelii (Gray) 1838—blue marlin. Atl.

Morrow (1958) has shown that *M. ampla,* the name by which this species has been known, is a synonym of *M. herschelii.* Bigelow and Schroeder (1953a).

XIPHIIDAE—swordfishes

Xiphias gladius Linnaeus 1758—broadbill swordfish. Atl.

Bigelow and Schroeder (1953a), Cox (1921).

TETRAGONURIDAE

Tetragonurus cuvieri Risso 1810—squaretail. Pac.

Dr. W. A. Clemens (Pers. comm.)

STROMATEIDAE—butterfishes

Peprilus simillimus (Ayres) 1860—California pompano. Pac.

Roedel (1953) places this species in *Palometa.*
Clemens and Wilby (1949), Hart (1949).

Poronotus triacanthus (Peck) 1800—butterfish. Atl.

Bigelow and Schroeder (1953a), Needler (1938), (1940), McKenzie (1939a), Nfld. Fish. Res. Comm. Rept. (1932), (1933).

NOMEIDAE (includes CENTROLOPHIDAE)—rudderfishes

Icichthys lockingtoni Jordan and Gilbert 1880—brown rudderfish. Pac.

Clemens and Wilby (1949).

Palinurichthys perciformis (Mitchill) 1818—black rudderfish. (logfish). Atl.

Bigelow and Schroeder (1953a), Halkett (1913), Ann. Rept. Fish. Res. Bd. Canada (1952).

GOBIIDAE—gobies

Clevelandia ios (Jordan and Gilbert) 1882—arrow goby. Pac.

Clemens and Wilby (1949).

Lepidogobius lepidus (Girard) 1858—finescaled goby. Pac.

Clemens and Wilby (1949).

Coryphopterus nicholsii (Bean) 1881—largescaled goby. Pac.

Clemens and Wilby (1949). Formerly in *Rhinogobiops.*

SCORPAENIDAE—rockfishes

Subfamily Sebastinae

Sebastes (including *Sebastodes*). The distinction between *Sebastes* and *Sebastodes* has been a slight one. Jordan and Evermann (1898) separate the two genera on the possession of 13 to 14 dorsal spines and $12+15$ vertebrae in *Sebastodes* and 15 to 16 dorsal spines and $12+19$ vertebrae in *Sebastes.* However, the European *Sebastes dactylopterus* possesses 11 spines; and Smitt (1893), reports Scandinavian *Sebastes* with 14 to 15 dorsal spines. Upon the discovery that some European forms were intermediate, the author checked Matsubara (1955) with the translating help of Teruya Uyeno, to determine if any Japanese forms might also bridge the gap. It was discovered that Matsubara had in 1943, in a reference little known to North Americans, reviewed the scorpaenid fishes and synonymized *Sebastodes* with *Sebastes.* In this excellent study, Matsubara found that in Japanese species hitherto referred to as *Sebastodes,* dorsal spines were from 12 to 15 and vertebrae 25 to 31. I therefore follow Matsubara in synonymizing *Sebastodes* Gill 1861 with *Sebastes* Cuvier 1829.

It is interesting to note that none of the Asiatic species of *Sebastes* or *Sebastodes* studied by Matsubara extend to North America, although one reaches Bering Island. A trans-Pacific study of this group, as well as others, probably would be valuable.

Alverson and Welander (1952) review Washington species; Phillips (1957) redescribes species from California. Sunde and Lindsey (1958) give a key to the B.C. species.

Sebastes alutus (Gilbert) 1890—longjaw rockfish. Pac.

Clemens and Wilby (1949).

Sebastes caurinus Richardson 1845—copper rockfish. Pac.

Clemens and Wilby (1949).

Sebastes crameri (Jordan) 1896—blackmouth rockfish. Pac.

Alverson and Welander (1952).

Sebastes dallii (Eigenmann and Beeson) 1894—brown rockfish. Pac.

Clemens and Wilby (1949). (*See* addenda, p. iv).

Sebastes diploproa (Gilbert) 1890—lobejaw rockfish. Pac.

Clemens and Wilby (1949).

Sebastes elongatus Ayres 1859—greenstriped rockfish. Pac.

Clemens and Wilby (1949).

Sebastes flavidus (Ayres) 1862—yellowtail rockfish. Pac.

Clemens and Wilby (1949).

Sebastes introniger (Gilbert) 1890—blackthroat rockfish. Pac.

Phillips (1957) synonymizes this species with *S. aleutianus* (Jordan and Evermann) 1898.

Clemens and Wilby (1949).

Sebastes maliger (Jordan and Gilbert) 1880—orangespotted rockfish (quillback). Pac.

Clemens and Wilby (1949).

Sebastes marinus (Linnaeus) 1758—ocean perch (rosefish). Arc., Atl.

European *S. marinus* have been divided into two subspecies, *marinus,* yellowish, small-eyed, round-chinned, and in shallow water; and *mentella,* red, large-eyed, and sharp-chinned, and occurring in deep water. Templeman and Sandeman (1957) have found forms similar to these subspecies in western North Atlantic. Since these forms are sympatric (usually at different depths), they cannot be subspecies and are either full species or merely products of their different environments.

Bigelow and Schroeder (1953a), Dunbar and Hildebrand (1952), Templeman and Sandeman (1957), Vladykov and Tremblay (1935), Templeman, Squires, and Fleming (1957), Steele (1957), Goode and Bean (1895), Schroeder (1955), Dannevig (1919), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934).

Sebastes melanops (Girard) 1856—black rockfish. Pac.

Clemens and Wilby (1949).

Sebastes miniatus (Jordan and Gilbert) 1880—vermilion rockfish. Pac.

Clemens and Wilby (1949).

Sebastes mystinus (Jordan and Gilbert) 1880—priestfish. Pac.

Clemens and Wilby (1949).

Sebastes nebulosus Ayres 1854—china rockfish. Pac.

Clemens and Wilby (1949).

Sebastes nigrocinctus Ayres 1859—black-banded rockfish. Pac.

Clemens and Wilby (1949).

Sebastes paucispinis Ayres 1854—bocaccio. Pac.
Clemens and Wilby (1949).

Sebastes pinniger (Gill) 1864—orange rockfish. Pac.
Clemens and Wilby (1949).

Sebastes proriger (Jordan and Gilbert) 1880—redstripe rockfish. Pac.
Clemens and Wilby (1949).

Sebastes rosaceus Girard 1854—rosy rockfish. Pac.
Sunde and Lindsey (1958).

Sebastes ruberrimus (Cramer) 1895—red snapper. Pac.
Clemens and Wilby (1949).

Sebastes rubrivinctus (Jordan and Gilbert) 1880—Spanish flag. Pac.
Ketchen (1954).

Sebastes saxicola (Gilbert) 1890—olivebacked rockfish. Pac.
Clemens and Wilby (1949).

Sebastes wilsoni (Gilbert) 1915—slender rockfish. Pac.
Clemens and Wilby (1949).

Sebastes zacentrus (Gilbert) 1890—bigeyed rockfish. Pac.
A *mentella*-like form.
Clemens and Wilby (1949).

Subfamily SEBASTOLOBINAE

Sebastolobus alascanus Bean 1890—spinycheeked rockfish. Pac.
Clemens and Wilby (1949).

TRIGLIDAE (including PERISTEDIIDAE)—sea robins

Prionotus carolinus (Linnaeus) 1771—(common sea robin). Atl.
Bigelow and Schroeder (1953a).

Prionotus evolans (Linnaeus) 1766—southern striped sea robin. Atl.
Dr. A. H. Leim (Pers. comm.)

HEXAGRAMMIDAE—greenlings

This family was revised by Rutenberg (1954) and Tarp (1952).

Hexagrammos decagrammus (Pallas) 1810—kelp greenling. Pac.
Clemens and Wilby (1949).

Hexagrammos stelleri Tilesius 1809—whitespotted greenling (common greenling). Pac.
Clemens and Wilby (1949).

Hexagrammos superciliosus (Pallas) 1810—fringed greenling. Pac.
Clemens and Wilby (1949).

Ophiodon elongatus Girard 1855—lingcod. Pac.
Some authors place this species in Ophiodontidae.

Clemens and Wilby (1949), Ketchen (1950), Anonymous (1954), Chatwin (1954).

Oxylebius pictus Gill 1862—painted greenling. Pac.
Clemens and Wilby (1949).

Zaniolepis latipinnis Girard 1857—longspined greenling. Pac.
Clemens and Wilby (1949).

ANOPLOPOMATIDAE—sablefishes

Anoplopoma fimbria (Pallas) 1814—sablefish. Pac.
Clemens and Wilby (1949), Manzer (1952), Ketchen and Forrester (1954).

Erilepis zonifer (Lockington) 1880—giant skilfish. Pac.
Wilimovsky (1954) places it in Erilepididae.
Clemens and Wilby (1949).

COTTIDAE (including RHAMPHOCOTTIDAE)—sculpins

Artediellus atlanticus Jordan and Evermann 1898—hookeared sculpin. Atl.
Jensen (1952) published a partial study of this genus. The North American ranges of this species and *A. uncinatus* are not clear.
Bigelow and Schroeder (1953a), Goode and Bean (1895), Nfld. Fish. Res. Comm. Rept. (1932), (1933)?

Artediellus uncinatus (Reinhardt) 1833—Arc.
Jensen (1952) records this species as south of *A. atlanticus* in Greenland.
Walters (1953a), (1955), Backus (1957).

Artedius fenestralis Jordan and Gilbert 1882—padded sculpin. Pac.
Clemens and Wilby (1949).

Artedius harringtoni (Starks) 1896—plumnose sculpin. Pac.
Clemens and Wilby (1949).

Artedius lateralis (Girard) 1855—roundnosed sculpin. Pac.
Clemens and Wilby (1949).

Ascelichthys rhodorus Jordan and Gilbert 1880—rosylip sculpin. Pac.
Clemens and Wilby (1949).

Asemichthys taylori Gilbert 1912—(Taylor's sculpin). Pac.
Clemens and Wilby (1949). (*See* addenda, p. iv).

Blepsias cirrhosus (Pallas) 1814—silver spot. Pac.
Clemens and Wilby (1949).

Chitonotus pugetensis (Steindachner) 1876—roughbacked sculpin. Pac.
Clemens and Wilby (1949).

Clinocottus acuticeps (Gilbert) 1895—sharpnosed sculpin. Pac.
Clemens and Wilby (1949).

Clinocottus embryum (Jordan and Starks) 1895—mossy sculpin. Pac.
Clemens and Wilby (1949).

Clinocottus globiceps (Girard) 1858—globeheaded sculpin. Pac.
Clemens and Wilby (1949).

Cottunculus microps Collett 1875—(Arctic sculpin). Atl.
Bigelow and Schroeder (1953a), Schroeder (1955).

Cottunculus thompsonii (Günther) 1882—Atl.
Schroeder (1955).

Cottus asper Richardson 1836—prickly sculpin. Pac.

This species has frequently been recorded from brackish waters in California. On 27 July, 1956, Sami Quadri, Gordon Hartman, and the author collected several specimens at low tide in Burrard Inlet at Pt. Atkinson. It is possible that the water was not completely salt because of the influence of the Fraser River.

Cottus cognatus Richardson 1836—slimy sculpin. Arc.
Dunbar and Hildebrand (1952).

Dasycottus setiger Bean 1890—spinyheaded sculpin. Pac.
Clemens and Wilby (1949).

Enophrys bison (Girard) 1855—buffalo sculpin. Pac.
Clemens and Wilby (1949).

Gymnocanthus galeatus Bean 1881—Arc.

According to Walters (1955) Vladykov's (1933) record is outside the range of other records and may be an extreme *G. tricuspis* or *G. detrisus.*

Vladykov (1933).

Gymnocanthus pistilliger (Pallas) 1814—pistillate sculpin. Arc.

Walters' (1953a) records of *Gymnocanthus* sp. are of this species.
Walters (1953a), (1955), Halkett (1913).

Gymnocanthus tricuspis (Reinhardt) 1832—staghorn sculpin. Arc., Atl.

This form is apparently the typical subspecies. Backus (1957) regards Vladykov's (1933) *G. t. hudsonius* as a synonym of *G. t. tricuspis.*

Walters (1953a), (1955), Backus (1957), Bigelow and Schroeder (1953a), Hildebrand (1939), Jeffers (1932), Dunbar and Hildebrand (1952), Vladykov (1933), Vladykov and Tremblay (1935), Ehrenbaum (1902), Ellis (1955), Dunbar (1947), Pfaff (1937), Jensen (1910).

Hemilepidotus hemilepidotus (Tilesius) 1810—red Irish lord. Pac.
Clemens and Wilby (1949).

Hemilepidotus spinosus (Ayres) 1855—brown Irish lord. Pac.
Clemens and Wilby (1949).

Hemitripterus americanus (Gmelin) 1789—sea raven. Arc., Atl.

Backus (1957) regards this as the typical subspecies.

Backus (1957), Bigelow and Schroeder (1953a), Templeman, Squires, and Fleming (1957), Stafford (1912), Cornish (1912), Jeffers (1932), Nfld. Fish. Res. Comm. Rept. (1932), (1934), Templeman and Fleming (1956), Richardson (1836).

Histiocottus bilobus (Cuvier) 1829—crested sculpin. Pac.

Wilimovsky (1954) places in *Blepsias.*

Clemens and Wilby (1949).

Icelinus borealis Gilbert 1895—(northern sculpin). Pac.

Clemens and Wilby (1949).

Icelinus filamentosus Gilbert 1890—filamented sculpin. Pac.

Clemens and Wilby (1949).

Icelinus tenuis Gilbert 1890—lesser filamented sculpin. Pac.

Clemens and Wilby (1949).

Icelus bicornis (Reinhardt) 1841—twohorned sculpin. Arc.

Old records are doubtful as *I. spatula* has been confused with this species. Walters (1953b) is uncertain as to the identity of Vladykov's (1933) records. *I. hamatus* is probably a synonym.

Walters (1953b), (1955), Backus (1957), Dunbar and Hildebrand (1952), Vladykov (1933)?, Hildebrand (1939), Günther (1877) and (1877a) as *I. hamatus,* Ehrenbaum (1902), Harper (1948), Jensen (1910).

Icelus spatula Gilbert and Burke 1912—spatulate sculpin. Arc.

See above about old records. Backus (1957) regards this form as *I. s. spatula.*

Walters (1953b), (1955), Backus (1957), Dunbar and Hildebrand (1952), Dannevig (1919) as *I. bicornis,* Pfaff (1937)? as *I. bicornis.*

Jordania zonope Starks 1895—longfinned sculpin. Pac.

Clemens and Wilby (1949).

Leptocottus armatus Girard 1855—cabezon (smooth sculpin). Pac.

Subspecies named appear to be clinal and hence do not stand up to the modern definition of subspecies (Bailey, Winn, and Smith 1954).

Clemens and Wilby (1949).

Malacottus kincaidi Gilbert and Thompson 1905—blackfinned sculpin. Pac.

Clemens and Wilby (1949).

Myoxocephalus aeneus (Mitchill) 1815—grubby. Atl.

Bigelow and Schroeder (1953a), Jeffers (1932), Vladykov and Tremblay (1935), Johansen (1926a), Cox (1921).

Myoxocephalus octodecemspinosus (Mitchill) 1815—longhorn sculpin. Atl.

Bigelow and Schroeder (1953a), Templeman, Squires, and Fleming (1957), Cornish (1912), Cox (1921), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Schroeder (1955), Templeman and Fleming (1956).

Myoxocephalus polyacanthocephalus (Pallas) 1814—great sculpin. Pac.

Clemens and Wilby (1949).

Myoxocephalus quadricornis (Linnaeus) 1758—fourhorned sculpin. Arc.

Walters (1955) gives reasons for dropping subspecies. It has been proposed that *Triglopsis thompsonii* be united with this species. There is no doubt that they are congeneric, but whether they are conspecific requires further study.

Walters (1953b, 1955, 1953a), Backus (1957), Dunbar and Hildebrand (1952) as *Oncocottus* (Backus and other authors have at least tentatively accepted Berg's and Popov's (1932) decision that *Oncocottus* Gill 1862 is congeneric with *Myoxocephalus* Tilesius 1811). Hildebrand (1939) as *Oncocottus*, Halkett (1913) as *Oncocottus hexacornis* and *Triglopsis thompsoni* (in part) (1928), as *O. hexacornis*, Vladykov (1933), Gordon and Backus (1957), Johansen (1925), Manning (1942), Ehrenbaum (1902), MacDonald (1953), Ellis (1955), Pfaff (1937), Soper (1935), Richardson (1836), Ross (1835).

Myoxocephalus scorpioides (Fabricius) 1780—false seascorpion. Arc.

Walters (1953a), (1955), Backus (1957), Dunbar and Hildebrand (1952), Vladykov (1933), Gordon and Backus (1957), Ehrenbaum (1902), Bean (1879), Ellis (1955), Harper (1948), Pfaff (1937).

Myoxocephalus scorpius (Linnaeus) 1758—seascorpion. Arc., Atl.

M. verrucosus (Bean), *M. groenlandicus* (Cuvier), *Cottus porosus* Valenciennes, and *Acanthocottus labradoricus* Storer as synonyms. Subspecific recognition is unwise at the present stage of knowledge.

Walters (1953a), (1955), Backus (1957), Dunbar and Hildebrand (1952), Hildebrand (1939), Vladykov and Tremblay (1935), Vladykov (1933), Grainger (1953), Jeffers (1932), Halkett (1928), Johansen (1925), Ehrenbaum (1902), Nfld. Fish. Res. Comm. Rept. (1934), Bean (1879), (1882), Ellis (1955), Richardson (1836), Schmidt (1904), Dannevig (1919), Pfaff (1937), Jensen (1910), Soper (1935).

Nautichthys oculofasciatus (Girard) 1857—sailorfish. Pac.

Clemens and Wilby (1949).

Oligocottus maculosus Girard 1856—tidepool sculpin. Pac.

Clemens and Wilby (1949).

Oligocottus rimensis (Greeley) 1901—pygmy sculpin (prickly sculpin). Pac.

Clemens and Wilby (1949).

Oligocottus snyderi Greeley 1898—fluffy sculpin. Pac.

Clemens and Wilby (1949).

Prionistius macellus Bean 1883—roughspined sculpin. Pac.

Removed from *Prionistius* Bean 1883 by Andriashev (1954) and Wilimovsky (1954) and placed in *Triglops*.

Clemens and Wilby (1949).

Radulinus asprellus Gilbert 1890—darter sculpin. Pac.

Clemens and Wilby (1949). (*See* addenda, p. iv).

Rhamphocottus richardsoni Günther 1874—gruntfish. Pac.

Clemens and Wilby (1949).

Scorpaenichthys marmoratus (Ayres) 1854—giant marbled sculpin. Pac.

Clemens and Wilby (1949).

Synchirus gilli Bean 1889—manacled sculpin. Pac.

Clemens and Wilby (1949), Miller and Erdman (1948).

Triglops beani Gilbert 1895—Pacific ribbed sculpin. Pac.
Clemens and Wilby (1949).

Triglops nybelini Jensen 1944—mailed sculpin. Arc.
Backus (1957), Dunbar and Hildebrand (1952), Gordon and Backus (1957), Jensen (1910).

Triglops pingelii Reinhardt 1832—ribbed sculpin. Arc., Atl.
According to Walters (1955), Schmidt (1950) considered *T. p. beani* of the North Pacific and *T. p. pingeli* of Greenland identical. Backus (1957) follows Jensen in considering *T. ommatistius* Gilbert a synonym of this species. Various subspecies have been named.

Walters (1953a), (1955), Vladykov (1933), Backus (1957), Dunbar and Hildebrand (1952), Bigelow and Schroeder (1953a), Grainger (1953), Hildebrand (1939), Vladykov and McKenzie (1935), Vladykov and Tremblay (1935), Jensen (1944), Goode and Bean (1895), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Bean (1879), Dunbar (1947).

PSYCHROLUTIDAE

Some authors unite this with COTTIDAE.

Gilbertidia sigalutes (Jordan and Starks) 1895—soft sculpin. Pac.
Clemens and Wilby (1949).

Psychrolutes paradoxus Günther 1861—tadpole sculpin. Pac.
Clemens and Wilby (1949).

AGONIDAE—seapoachers

Some authors divide this family into AGONIDAE (with 2 dorsals) and ASPIDOPHOROIDIDAE (with one dorsal).

Agonus acipenserinus Tilesius 1813—sturgeonlike seapoacher. Pac., Arc.
Some authors place this species in genus *Podothecus*.

Clemens and Wilby (1949), Mr. J. G. Hunter (pers. comm). (Banks Island, N.W.T.).

Anoplagonus inermis (Günther) 1860—smooth seapoacher. Pac.
Clemens and Wilby (1949).

Aspidophoroides monopterygius (Bloch) 1786—alligatorfish. Arc., Atl.
Backus (1957), Bigelow and Schroeder (1953a), Goode and Bean (1895), Vladykov and Tremblay (1935), Johansen (1926b), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Dannevig (1919), Wakeham (1898).

Aspidophoroides olrikii Lütken 1876—arctic seapoacher. Arc., Atl.
A. güntheri Bean of Alaska is a synonym.

Jensen (1942), Walters (1955), Vladykov (1933), Backus (1957), Dunbar and Hildebrand (1952), Ehrenbaum (1902), Dunbar (1947).

Asterotheca alascana (Gilbert) 1895—gray starsnout. Pac.
Clemens and Wilby (1949).

Asterotheca infraspinata (Gilbert) 1904—spinycheeked starsnout. Pac.
Clemens and Wilby (1949).

Averruncus emmelane Jordan and Starks 1895—windowtailed seapoacher. Pac.

Wilimovsky (1954) places in genus *Agonopsis.*

Clemens and Wilby (1949).

Bathyagonus nigripinnis Gilbert 1890—blackfinned seapoacher. Pac.
Clemens and Wilby (1949).

Bothragonus swanii (Steindachner) 1876—deep-pitted seapoacher. Pac.
Clemens and Wilby (1949).

Hypsagonus quadricornis (Cuvier) 1829—fourhorned seapoacher. Pac.
Clemens and Wilby (1949).

Leptagonus decagonus (Bloch and Schneider) 1801—northern alligatorfish. Arc. Atl.

Backus (1957), Jensen (1942), Ehrenbaum (1902), Nfld. Fish. Res. Comm. Rept. (1933), (1934), McKenzie and Homans (1937), Dannevig (1919), Dunbar (1947).

Occa verrucosa (Lockington) 1880—warty seapoacher. Pac.
Clemens and Wilby (1949).

Odontopyxis trispinosus Lockington 1879—pygmy seapoacher. Pac.
Clemens and Wilby (1949).

Pallasina barbata (Steindachner) 1876—Pac.
The B.C. form is placed in subspecies *P. b. aix* (Starks) 1896.
Barraclough (1951).

Xenopyxis latifrons (Gilbert) 1890—blacktipped seapoacher. Pac.
Wilimovsky places (1954) in *Asterotheca.*
Clemens and Wilby (1949).

CYCLOPTERIDAE (including LIPARIDAE)

The taxonomy of this group is at present in a state of confusion. A worldwide revision instead of local revisions is in order.

Careproctus gilberti Burke 1912—smalldisked liparid. Pac.
Clemens and Wilby (1949).

Careproctus longipinnis Burke 1912—Arc., Atl.

Bigelow and Schroeder (1953a) considered it likely that Vladykov and Tremblay's (1935) record of this species was probably *ranulus,* on geographic grounds. Recent records by Backus would make it likely that Vladykov and Tremblay were correct.

Backus (1957), Vladykov and Tremblay (1935), McKenzie and Homans (1937).

Careproctus melanurus Gilbert 1891—blacktail liparid. Pac.
Clemens and Wilby (1949), Barraclough and Waldichuk (1954).

Careproctus ovigerum (Gilbert) 1895—abyssal liparid. Pac.
Clemens and Wilby (1949).

Careproctus ranulus (Goode and Bean) 1879—sea tadpole. Atl.
See note under *Careproctus longipinnis.*
Bigelow and Schroeder (1953a), Goode and Bean (1895).

Careproctus reinhardi (Krøyer) 1862—Atl.
Vladykov and Tremblay (1935).

Cyclopterichthys ventricosus (Pallas) 1769—smooth lumpsucker. Pac.
Clemens and Wilby (1951).

Cyclopterus lumpus Linnaeus 1758—lumpfish. Arc., Atl.

Vladykov (1933), as *C. l. hudsonius* Cox 1820.

Backus (1957), Vladykov (1933), Bigelow and Schroeder (1953a), Stafford (1912), Jeffers (1932), Jensen (1944), Günther (1877a), Gordon and Backus (1957), Cox and Anderson (1922), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Schmitt (1904).

Eumicrotremus derjugini Popov 1926—leatherfin lumpsucker. Arc.

E. spinosus variabilis Jensen is conspecific with this species (Walters, 1953b). Myers and Bohlke (1950) express doubt of Vladykov's (1933) identification.

Walters (1953b), (1955), Backus (1957), Hildebrand (1939), Vladykov (1933).

Eumicrotremus orbis (Günther) 1861—Pacific spiny lumpsucker. Pac.

Jensen (1944) considered *E. orbis* and *E. pacificus* to be conspecific, but Walters (1953b) believes them to be distinct; Myers and Bolke (1950) appear to concur with Walters.

Clemens and Wilby (1949).

Eumicrotremus spinosus (Fabricius) 1776—Atlantic spiny lumpsucker, Arc., Atl.

Jensen (1944) gives reasons for authorship.

Walters (1953b), (1955), Backus (1957), Vladykov and McKenzie (1935), Bigelow and Schroeder (1953a), Hildebrand (1939), Dunbar and Hildebrand (1952), Vladykov (1933), Grainger (1953), Jensen (1944), Günther (1877), (1877a), Goode and Bean (1895), Vladykov and Tremblay (1935), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Dunbar (1947), Pfaff (1937)?.

Eumicrotremus terraenovae Myers and Bohlke 1950—Newfoundland lumpsucker. Atl.

Myers and Bohlke (1950), Bigelow and Schroeder (1953a).

Liparis atlanticus (Jordan and Evermann) 1898—seasnail. Arc., Atl.

The relationships of this to *L. montagui* of Europe, a close form, are not yet determined. Following Burke (1930) *Neoliparis,* in which this species has been placed, is considered a synonym of *Liparis.*

Backus (1957), Dunbar and Hildebrand (1952), Bigelow and Schroeder (1953a), Halkett (1913), Gordon and Backus (1957), Vladykov and Tremblay (1935), Nfld. Fish. Res. Comm. Rept. (1933), (1934).

Liparis callyodon (Pallas) 1814—(Pallas's liparid). Pac.
Clemens and Wilby (1949).

Liparis cyclopus Günther 1861—(Günther's liparid). Pac.
Clemens and Wilby (1949).

Liparis cyclostigma Gilbert 1895—Arc.
Backus (1957), Vladykov (1933), Gordon and Backus (1957).

Liparis dennyi Jordan and Starks 1895—(Denny's liparid). Pac.
Clemens and Wilby (1949).

Liparis florae (Jordan and Starks) 1895—shore liparid. Pac.
Clemens and Wilby (1949).

Liparis fucensis Gilbert 1895—Juan de Fuca liparid. Pac.
Clemens and Wilby (1949).

Liparis koefoedi Parr 1932—gelatinous seasnail. Arc.

Johansen's (1912) *L. fabricii* was shown by Parr to be this species; also that *L. major* (Gill) of Burke (1930) is in part this species. *See* the discussion in Dunbar and Hildebrand (1952) regarding the taxonomic confusion of this and other *Liparis.*

Walters (1953b), (1955), Backus (1957), Dunbar and Hildebrand (1952), MacDonald (1953), Bean (1879).

Liparis liparis (Linnaeus) 1766—northern seasnail. Arc., Atl.

Taxonomic confusion exists regarding *L. liparis* Linnaeus, *L. tunicatus* Reinhardt, and *L. herschelinus* (*see* Dunbar and Hildebrand, 1952, and Walters, 1955).

Walters (1953b, 1955, 1953a), Bigelow and Schroeder (1953a), Dunbar and Hildebrand (1952), Vladykov and Tremblay (1935), Nfld. Fish. Res. Comm. Rept. (1932, 1934), MacDonald (1953)?, Schmitt (1904), Jensen (1910).

Liparis pulchellus Ayres 1855—continuous finned liparid. Pac.
Clemens and Wilby (1949).

Liparis rutteri (Gilbert and Schneider) 1898—ringtail liparid. Pac.
Clemens and Wilby (1949).

Liparis tunicatus Reinhardt 1836—Arc., Atl.

See Backus (1957) and Dunbar and Hildebrand (1952) concerning nomenclature of this species. Walters (1953b) believed *L. herschelinus* to be aligned with *L. liparis;* according to Burke (1930) it is more intimately related to *L. tunicatus.*

Backus (1957), Dunbar and Hildebrand (1952), Hildebrand (1939), Gordon and Backus (1957), Vladykov and Tremblay (1935).

Nectoliparis pelagicus Gilbert and Burke 1912—tadpole liparid. Pac.
Clemens and Wilby (1949).

Paraliparis copei Goode and Bean 1895—Atl., Arc.

Schroeder (1955), Grey (1956). *P. bathybii* is reported in centre of Baffin Bay.

Paraliparis deani Burke 1912—prickly liparid. Pac.
Clemens and Wilby (1949).

Polypera greeni (Jordan and Starks) 1895—(Green's liparid). Pac.
Clemens and Wilby (1949).

DACTYLOPTERIDAE

Dactylopterus volitans (Linnaeus) 1758—flying gurnard. Atl.
McKenzie (1940), Richardson (1836).

BOTHIDAE—sand-dabs

Subfamily Bothinae

Citharichthys sordidus (Girard) 1855—mottled sand-dab, (Pacific sand-dab). Pac.
Clemens and Wilby (1949), Norman (1934).

Citharichthys stigmaeus Jordan and Gilbert 1882—speckled sand-dab. Pac.
Clemens and Wilby (1949), Norman (1934).

Subfamily Paralichthyinae

Paralichthys dentatus (Linnaeus) 1766—summer flounder. Atl.

Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), Norman (1934), Ann. Rept. Fish. Res. Bd. Canada (1955), Ginsburg (1952).

Paralichthys oblongus (Mitchill) 1815—fourspot flounder. Atl.
Some authors place this species in the genus *Hippoglossina*.
Scattergood and Goggins (1958), Ginsburg (1952).

Rhombus aquosus (Mitchill) 1815—windowpane. Atl.

Bigelow and Schroeder (1953a) and other authors have used the name *Lophopsetta maculata* (Mitchill) 1814 in referring to this species. However, Norman (1931) revealed that the trivial name was a primary homonym and synonymized *Lophopsetta* with *Scophthalmus*. But *Scophthalmus* and *Rhombus* are congeneric, and the latter is a *nomen conservandum*. Hence the proper name for the windowpane should be *Rhombus aquosus*.

Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935), McKenzie (1939), Cox (1921), Needler (1940), Nfld. Fish. Res. Comm. Rept. (1932), (1933).

PLEURONECTIDAE—flounders (*See* addenda, p. iv)

Atheresthes stomias (Jordan and Gilbert) 1880—arrowtooth flounder. Pac.
Clemens and Wilby (1949), Norman (1934).

Clidoderma asperrimum (Temminck and Schlegel) 1846—roughscale flounder. Pac.
Norman (1934), Welander, Alverson, and Bergman (1957).

Eopsetta jordani (Lockington) 1879—brill (roundnose flounder). Pac.

Clemens and Wilby (1949), Barraclough (1954a), Alverson and Chatwin (1957), Norman (1934).

Glyptocephalus cynoglossus (Linnaeus) 1758—witch flounder. Atl.

Bigelow and Schroeder (1953a), McKenzie (1939), Templeman, Squires, and Fleming (1957), Halkett (1913), Vladykov and Tremblay (1935), Goode and Bean (1895), Norman (1934), Cox (1921), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Schroeder (1955), Dannevig (1919), Stewart (1956), Frost (1938).

Glyptocephalus zachirus Lockington 1879—longfin flounder. Pac.

Clemens and Wilby (1949), Norman (1934).

Hippoglossoides elassodon Jordan and Gilbert 1880—flathead sole. Pac.

Some authors recognize subspecies (Walters, 1955).

Clemens and Wilby (1949), Norman (1934).

Hippoglossoides platessoides (Fabricius) 1780—plaice. Arc., Atl.

Some authors recognize subspecies.

Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Backus (1957), Bigelow and Schroeder (1953a), Templeman, Squires, and Fleming (1957), Cornish (1912), Jeffers (1932), Vladykov and Tremblay (1935), Goode and Bean (1895), Norman (1934), Schroeder (1955), Dannevig (1919), Stewart (1956), Frost (1938).

Hippoglossus hippoglossus (Linnaeus) 1758—Atlantic halibut. Arc., Atl.

Bigelow and Schroeder (1953a), McKenzie (1939), Martin and McCracken (1950), Cornish (1912), Jeffers (1932), Backus (1957), Goode and Bean (1895) as *H. vulgaris* Fleming, Norman (1934), Cox (1921), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Schmitt (1904), Schroeder (1955).

Hippoglossus stenolepis Schmidt 1904—Pacific halibut. Pac.

Andriashev (1954) reduces to a subspecies of the Atlantic halibut, *H. h. stenolepis.*

Clemens and Wilby (1949), Norman (1934).

Iopsetta isolepis (Lockington) 1880—buttersole (scalyfin flounder). Pac.

Clemens and Wilby (1949), Norman (1934).

Lepidopsetta bilineata (Ayres) 1855—rock sole (rock flounder). Pac.

Clemens and Wilby (1949), Anonymous (1948), Ketchen (1950b), Norman (1934).

Limanda aspera (Pallas) 1814—yellow fin sole (mud dab). Pac.

Clemens and Wilby (1949), Norman (1934).

Limanda ferruginea (Storer) 1839—yellowtail (rusty dab). Atl.

Bigelow and Schroeder (1953a), McKenzie (1939), Templeman, Squires, and Fleming (1957), Scott (1954), Jeffers (1932), Norman (1934), Cox (1921), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Stewart (1956).

Liopsetta glacialis (Pallas) 1776—arctic flounder. Arc.

Walters (1953a), (1955), Norman (1934), Richardson (1836).

Liopsetta putnami (Gill) 1864—smooth flounder. Arc., Atl.

This species is questionably distinct from *glacialis.*

Backus (1957), Bigelow and Schroeder (1953a), McKenzie (1939), Cornish (1912), Jeffers (1932), Vladykov and Tremblay (1935), Norman (1934), Nfld. Fish. Res. Comm. Rept. (1932).

Lyopsetta exilis (Jordan and Gilbert) 1880—slender sole. Pac.

Clemens and Wilby (1949), Norman (1934).

Microstomus pacificus (Lockington) 1879—Dover sole (slippery flounder). Pac.

Clemens and Wilby (1949), Norman (1934), Hagerman (1952).

Parophrys vetulus Girard 1855—lemon sole (lemon flounder). Pac.

Clemens and Wilby (1949), Ketchen (1950), (1950b), Ketchen and Forrester (1955), Ketchen (1956), Norman (1934).

Platichthys stellatus (Pallas) 1814—starry flounder. Pac., Arc.

Some authors (*see* Walters 1955) place this species in *Pleuronectes.* This subspecies is apparently *P. s. rugosus.*

Walters (1953a), (1955), Clemens and Wilby (1949), Norman (1934), Richardson (1854), (1836).

Pleuronichthys coenosus Girard 1855—C-O sole (C-O flounder). Pac.

Clemens and Wilby (1949), Norman (1934).

Pleuronichthys decurrens Jordan and Gilbert 1880—curlfin sole (curlfin flounder). Pac.

Clemens and Wilby (1949), Norman (1934).

Psettichthys melanostictus Girard 1855—sand sole (sand flounder). Pac.

Clemens and Wilby (1949), Manzer (1952), Norman (1934).

Pseudopleuronectes americanus (Walbaum) 1792—winter flounder. Arc., Atl.

Bigelow and Schroeder (1953a) indicate that *P. dignabilis* Kendall 1912 is a synonym.

Backus (1957), Bigelow and Schroeder (1953a), McKenzie (1939), Medcof and MacPhail (1952), Cornish (1912), Vladykov and Tremblay (1935), Norman (1934), Schmitt (1904), Needler (1940), Nfld. Fish. Res. Comm. Rept. (1932), (1933).

Reinhardtius hippoglossoides (Walbaum) 1792—Greenland halibut. Arc., Atl.

Bigelow and Schroeder (1953a), Dunbar and Hildebrand (1952), Templeman, Squires, and Fleming (1957), Gordon and Backus (1957), Vladykov and Tremblay (1935), Norman (1934), Nfld. Fish. Res. Comm. Rept. (1932), (1934), Riis-Cartsensen (1931), Schroeder (1955), Stewart (1955).

ICOSTEIDAE—ragfishes

Acrotus willoughbyi Bean 1887—brown ragfish. Pac.

Pike (1950).

Icosteus aenigmaticus Lockington 1880—fantail ragfish. Pac.

Clemens and Wilby (1949), Pike (1950).

ECHENEIDAE

Echeneis naucrates Linnaeus 1758—sharksucker. Atl.

Bigelow and Schroeder (1953a), Richardson (1836).

Remilegia australis (Bennett) 1840—whalesucker. Pac.

Clemens and Wilby (1949).

Remora brachyptera (Lowe) 1839—swordfish sucker. Atl.

Dr. A. H. Leim (pers. comm.).

Remora remora (Linnaeus) 1758—blue sharksucker. Atl.

Bigelow and Schroeder (1953a).

BALISTIDAE (MONACANTHIDAE)—filefishes

Subfamily Balistinae

Balistes capriscus Gmelin 1789—triggerfish. Atl.

Bigelow and Schroeder (1953a) preferred *B. carolinensis* to this name because of its greater usage and because of page priority. Günther (1870) realized they were synonymous and called this species *capriscus,* apparently acting as the first reviser.

Bigelow and Schroeder (1953a), Vladykov and McKenzie (1935).

Subfamily Monacanthinae

Alutera schoepfi (Walbaum) 1792—orange filefish. Atl.

Bigelow and Schroeder (1953a) place this species in the genus *Ceratocanthus* Gill 1801.

Bigelow and Schroeder (1953a), Ann. Rept. Fish. Res. Bd. Canada (1955), McKenzie (1939a).

Monacanthus ciliatus (Mitchill) 1818—longhorn filefish. Atl.

Bigelow and Schroeder (1953a), Nfld. Fish. Res. Comm. Rept. (1933).

Monacanthus hispidus (Linnaeus) 1766—straightnosed filefish. Atl.

Bigelow and Schroeder (1953a).

TETRODONTIDAE

Sphoeroides maculatus (Bloch and Schneider) 1801—Atl.

Ann. Rept. Fish. Res. Bd. Canada (1957), Bigelow and Schroeder (1953a).

DIODONTIDAE

Chilomycterus schoepfi (Walbaum) 1792—burrfish. Atl.

Halkett (1913), Vladykov and McKenzie (1935).

MOLIDAE—ocean sunfishes

Mola mola (Linnaeus) 1758—ocean sunfish. Pac., Atl.

Clemens and Wilby (1949), Bigelow and Schroeder (1953a), Stafford (1912), Halkett (1913), Dunbar (1950), Wilimovsky (1954), Medcof and Schiffman (1947), Nfld. Fish. Res. Comm. Rept. (1933).

GOBIESOCIDAE—clingfishes

Recent monograph on the family by Briggs (1955).

Gobiesox maendricus (Girard) 1858—(common clingfish). Pac.

Briggs (1955) places this species in the genus *Gobiesox* (has been in *Sicyogaster*).

Clemens and Wilby (1949), Briggs (1955).

Rimicola muscarum (Meek and Pierson) 1895—slender clingfish. Pac.

The B.C. species called *R. eigenmanni* should, according to Briggs (1955), be termed *R. muscarum.*

Clemens and Wilby (1949), Briggs (1955).

BATRACHOIDIDAE—toadfishes

Porichthys notatus Girard 1855—northern midshipman. Pac.

Clemens and Wilby (1949).

LOPHIIDAE—anglers

Lophius americanus Valenciennes 1837—American goosefish. Atl.

According to Bigelow and Schroeder (1953a), Pennant in 1784 reported *L. piscatorius* in Hudson Bay; this record and that of *L. laevigatus* from Okak, Labrador, were probably based on sculpins. It has been thought that this species was identical with the European *L. piscatorius.* Berrill (1929) gives larval differences and separates American and European forms.

Bigelow and Schroeder (1953a), Halkett (1913), Templeman, Squires, and Fleming (1957), Cornish (1912), Berrill (1929), McKenzie (1936), Lewis (1939), Nfld. Fish. Res. Comm. Rept. (1932, 1933, 1934), Schroeder (1955), Dannevig (1919).

ONEIRODIDAE—seadevils

Oneirodes eschrichtii Lütken 1871—bullfish. Pac.

Bertelsen (1951) places *O. bulbosus,* by which name this species has been known, in an *"O. eschrichti* group."

Clemens and Wilby (1949), Bertelsen (1951).

OGOCEPHALIDAE—batfishes

Dibranchus atlanticus Peters 1875—Atl.

Schroeder (1955), Ann. Rept. Fish. Res. Bd. Canada (1957).

HIMANTOLOPHIDAE

Himantolophus groenlandicus Reinhardt 1837—Atl.

Ann. Rept. Fish. Res. Bd. Canada (1955), Grey (1956).

CERATIIDAE

Ceratias holboelli Krøyer 1844—deepsea angler. Atl.

The "o" with an umlaut has been transliterated to "oe." *Mancalias tentaculatus* Norman is a synonym of this species.

Bigelow and Schroeder (1953a), Bertelsen (1951), Ann. Rept. Fish. Res. Bd. Canada (1957).

REFERENCES

Alverson, D. L. (1951). New records for marine fishes from southeastern Alaska. Copeia (1):86.

Alverson, D. L., and B. M. Chatwin (1957). Results from tagging experiments on a spawning stock of petrale sole, *Eopsetta jordani* (Lockington). J. Fish. Res. Bd. Canada 14(6):953-974.

Alverson, D. L., and A. D. Welander (1952). Notes on the scorpaenid fishes of Washington and adjacent areas, with a key for their identification. Copeia (3):138-143.

American Fish. Soc., Spec. Pub. (1):1-45 (1948). A list of common and scientific names of the better known fishes of the United States and Canada.

Anderson, R. M. (1913). Report on the natural history collections. *In* My life with the Eskimos. By V. Stefansson. New York. Macmillan. pp. 538+i-ix.

Andrews, C. W., and E. Lear (1956). The biology of arctic char (*Salvelinus alpinus* L.) in northern Labrador. J. Fish. Res. Bd. Canada 13(6):843-860.

Andriashev, A. P. (1954). Fishes of the northern seas of U.S.S.R. (in Russian). Acad. Sci. U.S.S.R. Moscow. pp. 1-566.

Ann. Rept. Fish. Res. Bd. Canada. 1933 (1934), pp. 1-123; 1950 (1951), pp. 1-138; 1951 (1952), pp. 1-185; 1952 (1953), pp. 1-231; 1953 (1954), pp. 1-185; 1954 (1955), pp. 1-187; 1955 (1956), pp. 1-182; 1956 (1957), pp. 1-195.

Anonymous (1948). Spawning of the rockfish. Fish. Res. Bd. Canada, Prog. Repts., Pac. Coast Stations. (76):88.

Anonymous (1954). An unusual catch of green sturgeon. Fish. Res. Bd. Canada, Prog. Repts. Pac. Coast Stations (100):19.

Aron, W., and P. McCrery (1958). A description of a new species of stomiatid from the North Pacific Ocean. Copeia (3):180-183.

Backus, R. H. (1957). The fishes of Labrador. Bull. Am. Mus. Nat. Hist. 113(4):273-338.

Bailey, R. M. (1955). Committee on names of fishes. Trans. Am. Fish. Soc. 84:368-371.

————(1956). A revised check-list of the fishes of Iowa. Reprinted from J. R. Harlan and E. B. Speaker. Iowa Fish and Fishing, pp. 325-377.

————(1957a). Proposed use of the plenary powers to set aside in the interests of stability "first reviser" selections made for the generic name "Selene" Lacepedes, 1803, and for the specific names *"rostrata"* LeSueur, 1817 (*"Muraena"*), *"Latipinna"* LeSueur, 1821 (*"Mollienesia"*), and *"fuscus"* Storer, 1839 (*"Syngnathus"*) (Class Pisces). Bull. Zool. Nomencl. 13(10-11):304-308.

————(1957b). Request for a ruling determining the authorship to be attributed to the various portions of the work entitled "Histoire Naturelle des Poissons" written partly by Cuvier and partly by Valenciennes and published in the period 1828-1850. Bull. Zool. Nomencl. 13(10-11):309-312.

Bailey, R. M., H. E. Winn, and C. L. Smith (1954). Fishes from the Escambia River, Alabama, and Florida, with ecologic and taxonomic notes. Proc. Acad. Nat. Sci. Phila. 106:109-164.

Barraclough, W. E. (1948). The hagfish (*Polistotrema stoutii*) in British Columbia Fish. Res. Bd. Canada, Prog. Repts. Pac. Coast Stations (75):57-58.

————(1948a). The decline of the soupfin shark fishery in British Columbia. Fish. Res. Bd. Canada, Prog. Repts. Pac. Coast Stations (77):91-94.

————(1951). The agonid fish *Pallasina barbata aix* (Starks), from British Columbia. J. Fish. Res. Bd. Canada 9(3):143-147.

————(1954). A second inshore record of the bathypelagic viperfish *Chauliodus macouni* from British Columbia. Copeia (1):75-76.

————(1954a). Winter recaptures of tagged brill from deep water off the west coast of Vancouver Island. Fish. Res. Bd. Canada, Prog. Repts. Pac. Coast Stations (100):16-18.

————(1956). The occurrence of the two-pronged hatchetfish, *Argyropelecus sladeni*, in British Columbia. Copeia (4):109-110.

Barraclough, W. E., and M. Waldichuk (1954). Offshore characteristics in the deep waters of the Strait of Georgia as indicated by bathypelagic fish. J. Fish. Res. Bd. Canada 11(5):501-506.

Bayliff, W. H. (1959). Notes on the taxonomy and distribution of certain zoarcid fishes in the northeastern Pacific. Copeia (1):78-80.

Bean, T. H. (1879). Fishes . . . collected in Cumberland Gulf and Disko Bay. *In* Contributions to the natural history of arctic America, by L. Kumlien. Bull. U.S. Nat. Mus. 15:107-138.

Belding, D. L., and G. Préfontaine (1938). Etudes sur le saumon d'Atlantique (*Salmo salar* L.)—I. Contrib. Inst. Zool. Univ. Montréal (2):1-50.

————, and————(1938a). Etudes sur le saumon d'Atlantique (*Salmo salar* L.)—II. Contrib. Inst. Zool. Univ. Montréal (3):1-58.

————, and————(1939). Etudes sur le saumon d'Atlantique (*Salmo salar* L.)—III. Contrib. Inst. Zool. Univ. Montréal (4):1-63.

Berg, L. S. (1940). Classification of fishes both recent and fossil. Trav. Inst. Zool. Acad. Sci. U.S.S.R. 5(2):87-517. Lithoprinted with translation, 1947, Ann Arbor, Mich.

Berg, L. S., and A. Popov (1932). A review of the forms of *Myoxocephalus quadricornis* (L.). C. R. Acad. Sci. U.S.S.R. 6:152-160.

Berrill, N. J. (1929). The validity of *Lophius americanus* Val., as a species distinct from *L. piscatorius* Linn., with notes on the rate of development. Contrib. Can. Biol. Fish. New Ser. 4(12):143-155.

Bertelsen, E. (1951). The Ceratioid fishes, ontogeny, taxonomy, distribution and biology. Dana-Report (39):1-281.

Bigelow, H. B., and W. C. Schroeder (1944). New sharks from the western North Atlantic. Proc. New England Zool. Club 23:21-36.

————, and————(1953a). Fishes of the Gulf of Maine. Fish. Bull. U.S. Fish Wildlife Service 53:1-577.

————, and————(1953b). Fishes of the western North Atlantic. Part II. Mem. Sears Found. Mar. Res. (1), part 2. i-xv+1-588.

Bigelow, H. B., W. C. Schroeder, and I. P. Farfante (1948). Fishes of the western North Atlantic. Mem. Sears Found. Mar. Res. (1) i-xvii+1-576.

Blair, A. A. (1943). Salmon investigations. 2. Atlantic salmon of the east coast of Newfoundland and Labrador, 1939. Nfld. Dept. Nat. Resources, Res. Bull. (Fish.). (13):1-21.

————(1956). Atlantic salmon tagged in east coast Newfoundland waters at Bonavista. J. Fish. Res. Bd. Canada 13(2):219-232.

————(1957). Salmon tagging at Francis Harbour Bight, Labrador. J. Fish. Res. Bd. Canada 14(2):135-140.

Bolin, R. (1939). A review of the myctophid fishes of the Pacific coast of the United States and lower California. Stanford Ichth. Bull. 1(4):89-156.

Briggs, J. C. (1955). A monograph of the cling fishes (order Xenopterygii). Stanford Ichth. Bull. 6:1-224.

Burke, V. (1930). Revision of the fishes of the family Liparidae. U.S. Nat. Mus. Bull. 150:1-204.

Carl, G. C. (1951). The thresher shark in British Columbia. Can. Field-Nat. 65(2):83.

Carl, G. C., and W. A. Clemens (1953). The fresh-water fishes of British Columbia. B.C. Prov. Mus., Handbook (5):1-136.

Chapman, W. M. (1939). Eleven new species and three new genera of oceanic fishes collected by the International Fisheries Commission from the north-eastern Pacific. Proc. U.S. Nat. Mus. 86:501-542.

Chatwin, B. M. (1954). Growth of young ling cod. Fish. Res. Bd. Canada, Prog. Repts. Pac. Coast Stations (99):14-17.

Clemens, W. A., and L. S. Clemens (1921). Contribution to the biology of the muttonfish *Zoarces anguillaris*. Contrib. Can. Biol. 1918-20 (6):69-83.

Clemens, W. A., and G. V. Wilby (1949). Fishes of the Pacific coast of Canada. Bull. Fish. Res. Bd. Canada 68:1-368. Rev. ed.

————, and————(1952). The first record of the smooth lump-sucker, *Cyclopterichthys ventricosus* (Pallas), in British Columbia waters. J. Fish. Res. Bd. Canada 9(3):141-142.

Cohen, D. M. (1956). The synonymy and distribution of *Leuroglossus stilbius* Gilbert, a North Pacific bathypelagic fish. Stanford Ichth. Bull. 7 (2):19-23.

————(1958). A revision of the fishes of the subfamily Argentininae. Bull. Florida State Mus. 3(3):93-172.

Cornish, G. A. (1912). Notes on fishes of Tignish, Prince Edward Island. Contrib. Can. Biol. 1906-1910 (7):79-81.

Cox, P. (1921). List of fishes collected in 1917 off the Cape Breton coast and the Magdalen Islands. Contrib. Can. Biol. 1918-1920 (11):109-114.

————(1922). Results of the Hudson Bay Expedition, 1920. II. The Gasterosteidae. Contrib. Can. Biol. 1921:149-153.

————(1923). Regional variation of the four-spined stickleback, *Apeltes quadracus* Mitchill. Can. Field-Nat. 37(8):146-147.

————(1923a). A new stickleback from the west coast of Newfoundland. Can. Field-Nat. 37(8):147-148.

Cox, P., and Marian Anderson (1922). A study of the lumpfish (*Cyclopterus lumpus* L.). Contrib. Can. Biol. New Ser. 1(1):1-20.

Dannevig, A. (1919). Fish-eggs and larvae. *In* Hjort, J. Can. Fish. Exped. 1914-15. Dept. Naval Service Canada, Ottawa, King's Printer.

Day, L. R., and H. D. Fisher (1954). Notes on the great white shark, *Carcharodon carcharias*, in Canadian Atlantic waters. Copeia (4):295-296.

DeLacey, A. C., and W. M. Morton (1943). Taxonomy and habits of the charrs, *Salvelinus a. malma* and *Salvelinus alpinus*, of the Karluk drainage system. Trans. Am. Fish. Soc. 72:79-91.

Doan, K. H., and C. W. Douglas (1953). Beluga of the Churchill region of Hudson Bay. Bull. Fish. Res. Bd. Canada (98):1-27.

Dunbar, M. J. (1947). Marine young fish from the Canadian eastern arctic. Bull. Fish. Res. Bd. Canada (73):1-11.

————(1950). *Mola mola* (Linnaeus) from the lower Saint Lawrence. Can. Field-Nat. 64(3):124-125.

Dunbar, M. J., and H. H. Hildebrand (1952). Contribution to the study of fishes of Ungava Bay. J. Fish. Res. Bd. Canada 9(2):83-128.

Dymond, J. R. (1928). Needle-fish (*Scomberesox saurus*) from the Gulf of Saint Lawrence. Can. Field-Nat. 42(2):47.

————(1931). A second record of the saury or billfish (*Scomberesox saurus*) from the Gulf of Saint Lawrence. Can. Field-Nat. 45(2):41-42.

————(1933). Biological and oceanographic conditions in Hudson Bay. 8. The coregonine fishes of Hudson and James bays. Contrib. Can. Biol. Fish., New Ser. 8:1-12.

————(1940). Pacific salmon in the Arctic Ocean. Proc. 6th. Pacific Sci. Cong. p. 435.

————(1941). Atlantic salmon in Ungava Bay. Can. Field-Nat. 55(2):19-20.

————(1942). The occurrence of the dolly varden char in salt water off British Columbia. Can. Field-Nat. 56(7):110-112.

————(1943). The coregonine fishes of northwestern Canada. Trans. Roy. Can. Inst. 24(2):171-231.

————(1947). A list of the freshwater fishes of Canada east of the Rocky Mountains with keys. Roy. Ontario Mus. Zool. Misc. Pub. (1):1-36.

————(1955). The introduction of foreign fishes. Proc. Internat. Assoc. Theor. and Applied Limnology 12:543-553.

Ege, V. (1930). The north Atlantic and the Mediterranean species of the genus *Paralepis* Cuv. Rept. Dan. Oceanograph. Exped. 1908-1909, vol. 2.

————(1934). The genus *Stomias* Cuv., taxonomy and bio-geography. The Carlsberg Found. Ocean. Exped. around the world, 1928-1930. Dana-Rept. (5):1-50.

————(1953). Paralepididae I (*Paralepis* and *Lestidium*). Dana-Rept. (40):1-184, 33 text-fig.

Ehrenbaum, E. (1902). Die Fische. *In* Fauna Arctica (In German). Jena 2 (1):65-168.

Ellis, D. V. (1955). Some observations on the shore of Baffin Island. Arctic 8(4):224-236.

Forrester, C. R. (1954). Tagging experiments on gray cod. Fish. Res. Bd. Canada, Prog. Repts. Pac. Coast Stations (99):28-29.

Fowler, H. W. (1948). Fishes in the Nueltin Lake Expedition, Keewatin, 1947. Part 1—Taxonomy. Proc. Acad. Nat. Sci. Phila. 100:141-152.

Fraser-Brunner, A. (1949). A classification of the fishes of the family Myctophidae. Proc. Zool. Soc. London 118(4):1019-1106.

————(1950). The fishes of the family Scombridae. Ann. Mag. Nat. Hist. ser. 12, 3:131-163.

Frost, Nancy (1938). Some fishes of Newfoundland waters. Newfoundland Dept. Nat. Resources Res. Bull. (4):1-16.

Gibbs, R. H., Jr. (1957). A taxonomic analysis of *Myctophum.* Deep-sea Res. 4(4):230-237.

Gill, T. H. (1892). Bibliography of the fishes of the Pacific coast of the United States. Bull. U.S. Nat. Mus. (11):1-73.

Ginsburg, I. (1952). Flounders of the genus *Paralichthys* and related genera in American waters. U.S. Fish Wildlife Serv., Fish. Bull. 52(71):267-351.

————(1953). The taxonomic status and nomenclature of some Atlantic and Pacific populations of yellowfin and bluefin tunas. Copeia (1):1-10.

Godsil, H. C. (1954). A descriptive study of certain tuna-like fishes. State Calif. Dept. Fish and Game, Fish. Bull. (97):1-185.

————(1955). A description of two species of bonito. State Calif. Dept. Fish and Game, Fish. Bull. (99):1-43.

Goode, G. B., and T. H. Bean (1895). Oceanic ichthyology, a treatise on the deep-sea and pelagic fishes of the world. Spec. Bull. U.S. Nat. Mus. (2), text, xxxvi+553; atlas, xxiv+26.

Gordon, M. S., and R. H. Backus (1957). New records of Labrador fishes with special reference to those of Hebron Fiord. Copeia (1):17-20.

Grainger, E. H. (1953). On the age, growth, migration, reproductive potential, and feeding habits of the arctic char (*Salvelinus alpinus*) of Frobisher Bay, Baffin Island. J. Fish. Res. Bd. Canada 10(6):326-370.

Grey, Marrion (1956). The distribution of fishes found below a depth of 2000 metres. Fieldiana: Zool. 36(2):1-337.

Günther, A. (1862). Catalogue of the fishes in the British Museum. Vol. 4. London.

————(1877). Account of the fishes collected by Capt. Feilden between 78° and 83° N. lat., during the Arctic Expedition 1875-6. Proc. Zool. Soc. London, 1877, pp. 293-295.

————(1877a). Report on a collection of fishes made by Mr. C. Hart during the late Arctic Expedition. Proc. Zool. Soc. London, 1877, pp. 475-477.

Hagerman, F. B. (1952). The biology of the dover sole, *Microstomus pacificus* (Lockington). Calif. Fish and Game, Fish. Bull. (85):1-48.

Halkett, A. (1913). A check list of the fishes of the Dominion of Canada and Newfoundland. Ottawa, King's Printer.

————(1928). Notes on a collection of fish from Baffin Island. *In* Soper, J. D. A faunal investigation of southern Baffin Island. Bull. Nat. Hist. Mus. Canada (53):117-118.

Harper, F. (1948). Fishes of the Nueltin Lake expedition, Keewatin, 1947. Part 2. Historical and field notes. Proc. Acad. Nat. Sci. Phila. 100:153-184.

Hart, J. L. (1949). Increased abundance of an unusual British Columbia fish, the California pompano. Can. Field-Nat. 63(3):101-102.

Henn, A. W. (1932). Some fishes of Southampton Island. *In* G. M. Sutton, and others. The exploration of Southampton Island, Hudson Bay. Carnegie Inst. Mus. Mem. 12, pt. 2. sect. 3:1-3.

Heuts, M. J. (1947). Experimental studies on adaptive evolution in *Gasterosteus aculeatus* L. Evolution 1:89-102.

Hildebrand, S. F. (1939). An annotated list of fishes collected on the several expeditions to Greenland, the Fox Basin region, and the coast of Labrador by Captain R. A. Bartlett, from 1925 to 1935. Meddel. om Grønl. (Kommissionen for Videnskabelige undersøgelser i Grønland) 125(1):1-12.

Hinks, D. (1943). The fishes of Manitoba. Pub. by Dept. Mines and Nat. Resources, Prov. Man., pp. i-x+1-102.

Hourston, A. S., and R. H. Herlinveaux (1957). A "mass mortality" of fish in Alberni Harbour, B.C. Fish. Res. Bd. Canada, Prog. Repts. Pac. Coast Stations. (109):3-6.

Hubbs, C. L. (1929). The Atlantic American species of the fish genus *Gasterosteus.* Occ. Pap. Mus. Zool., Univ. Michigan (200):1-9.

————(1953). Synonymy of the bathypelagic fish genus *Rhyncholhyalus,* referred to the expanded family Argentinidae. Copeia (2):96-97.

————(1955). A juvenile gadid fish from the Labrador Sea representing a species of Gaidropsarus, apparently new for North America. Copeia (1):49-50.

Hubbs, C. L., and L. C. Hubbs (1954). Data on the life history, variation, ecology, and relationships of the kelp perch, *Brachyistius frenatus,* an embiotocid fish of the Californias. Calif. Fish and Game 40(2):183-198.

Hubbs, C. L., and W. I. Follett (1947). *Lamna ditropis,* new species, the salmon shark of the North Pacific. Copeia (3):194.

Hubbs, C. L., G. W. Mead, and N. J. Wilimovsky (1953). The widespread, probably antitropical distribution and the relationship of the bathypelagic iniomous fish *Anotopterus pharao*. Bull. Scripps Inst. Ocean. 6(5):173-198.

Hubbs, Clark (1952). A contribution to the classification of the blennioid fishes of the family Clinidae, with a partial revision of the eastern Pacific forms. Stanford Ichth. Bull. 4(2):41-165.

Huntsman, A. G. (1921). The fishes of the Bay of Fundy. Contrib. Canadian Biol. (3):49-72.

Jean, Yves (1946). Two northern longnose gars *Lepisosteus osseus oxyurus* Rafinesque, caught in the estuary of the St. Lawrence, Quebec. Copeia (2):100.

Jeffers, G. W. (1932). Fishes observed in the strait of Belle Isle. Contrib. Can. Biol. Fish. New Ser. 7(13):203-211.

Jensen, A. S. (1910). Fishes. Rept. Second Norwegian Arctic Exped. *"Fram"* 1898-1902. (25):1-15.

————(1941). On subspecies and races of the lesser sand eel (*Ammodytes lancea* s. lat.) Kgl. Dansk. Vidensk. Selsk. Biol. Medd. 16(9):1-33.

————(1942). Contributions to the ichthyofauna of Greenland, 1-3. Skrift. U. Zool. Mus. København. 2:1-44.

————(1944). Contributions to the ichthyofauna of Greenland, 4-7. Skrift. U. Zool. Mus. København. 4:1-60.

————(1948). Contributions to the ichthyofauna of Greenland, 8-24. Skrift. U. Zool. Mus. København. 9:1-182.

————(1952). On the Greenland species of the genera *Artediellus, Cottunculus,* and *Gymnocanthus.* Meddel. om Grønl. 142(7):1-21.

Johansen, Frits (1925). Fishes and marine invertebrates collected during the cruise of the *"Arctic"* in 1923. Can. Field-Nat. 39:203-204.

————(1925a). Natural history of the cunner (*Tautogolabrus adspersus* Walbaum). Contrib. Can. Biol. New Ser. 2(17):423-468.

————(1926). Fishes collected in Newfoundland during the autumn of 1922. Can. Field-Nat. 40(1):1-6.

————(1926a). Fishes collected in Newfoundland during the autumn of 1922. Can. Field-Nat. 40(2):31-36.

————(1926b). Fishes collected in the Gaspe Peninsula during August 1922. Can. Field-Nat. 40(8):175-178.

Jordan, D. S., and B. W. Evermann (1898). Fishes of North and Middle America. Bull. U.S. Nat. Mus. 47.

Jordan, D. S., B. W. Evermann, and H. W. Clark (1930). Checklist of the fishes of North and Middle America. Rept. U.S. Comm. Fish. 1928 (1930) Append. x. pp. 1-670. 1955 reprint.

Kelcher, J. J., and B. Kooyman (1957). Supplement to Hinks, "The fishes of Manitoba." Manitoba Dept. Mines and Nat. Resources, Fish. Res. Bd.

Kendall, W. C. (1909). The fishes of Labrador. Proc. Portland Soc. Nat. Hist. 2:207-243.

Ketchen, K. S. (1950). A study of the winter trawl fisheries at Cape Lazo and Nanoose Bay in the Strait of Georgia with special reference to the capture of ling cod. Fish. Res. Bd. Canada, Prog. Repts. Pac. Coast Stations (84):64-67.

————(1950a). The migration of lemon soles in northern Hecate Strait. Fish. Res. Bd. Canada, Prog. Repts. Pac. Coast Stations (50):75-79.

————(1954). The rockfish *Sebastodes rubrivinctus* in British Columbia waters. J. Fish. Res. Bd. Canada. 11(3):335-338.

————(1955). Trends in the gray cod fishery of Georgia Strait. Fish. Res. Bd. Canada, Prog. Repts. Pac. Coast Stations (102):10-13.

————(1956). Factors influencing the survival of the lemon sole (*Parophrys vetulus*) in Hecate Strait, British Columbia. J. Fish. Res. Bd. Canada 13(5):647-694.

Ketchen, K. S., and C. R. Forrester (1954). The sablefish fishery of British Columbia. Bull. Pac. Mar. Fish. Comm. (3):57-72.

————, and————(1955). Migrations of the lemon sole (*Parophrys vetulus*) in the Strait of Georgia. Fish. Res. Bd. Canada, Prog. Repts. Pac. Coast Stations. (104):11-15.

Kielhorn, W. V. (1952). The biology of the surface zone zooplankton of a boreo-arctic Atlantic ocean area. J. Fish. Res. Bd. Canada 9(5):223-264.

Legendre, V., and J. Rousseau (1949). La distribution de quelques-uns de nos poissons dans le Québec Arctique. Ann. de l'A.C.F.A.S. 15:133-135.

Leim, A. H. (1924). The life history of the shad (*Alosa sapidissima* (Wilson)) with special reference to the factors limiting its abundance. Contrib. Can. Biol., New Ser. 2(11):161-284.

Lewis, H. F. (1939). A northern occurrence of the angler (*Lophius piscatorius* Linn.) on the coast of the province of Quebec. Can. Field-Nat. 53(8):121.

Lindberg, G. U. (1937). On the classification and distribution of sandlances genus *Ammodytes* (Pisces). Bull. Far East Branch Acad. Sci. U.S.S.R. (27):85-93.

Lindsey, C. C. (1956). Recommended common and scientific names of British Columbia freshwater fishes. Fish. Management Div. B.C. Game Comm. pp. 1-20.

————(1956a). Distribution and taxonomy of fishes in the Mackenzie drainage of British Columbia. J. Fish. Res. Bd. Canada 13(6):759-789.

Lindsey, Sheila T., and H. Thompson (1932). Biology of the salmon (*Salmo salar* L.) taken in Newfoundland waters in 1931. Rept. Newfoundland Fish. Res. Comm. 1(2):1-80.

Livingstone, D. A. (1951). The fresh water fishes of Nova Scotia. Proc. Nova Scotian Inst. Sci. 1950-51. 23(1):1-90.

Lütken, C. F. (1899). The ichthyological results. The Danish Ingolf-expedition, 1895-96. Copenhagen, B. Luno. 2(1):1-39.

MacDonald, S. D. (1953). Report on biological investigations at Alert, N.W.T. Nat. Mus. Canada, Bull. (128):241-256.

Makushok, U. M. (1958). The morphology and classification of the northern blennioid fishes (Stichaeoidae, Blennioidii, Pisces). Stud. Zool. Inst. Akad. Nauk. U.S.S.R. 25:3-129 (In Russian).

Manning, T. H. (1942). Notes on some fish of the eastern Canadian arctic. Can. Field-Nat. 56:128-129.

————(1953). Notes on the fish of Banks Island. Arctic 6(4):276-277.

Manzer, J. I. (1952). Notes on dispersion and growth of some British Columbia bottom fishes. J. Fish. Res. Bd. Canada 8(5):374-377.

Martin, W. R., and F. D. McCracken (1950). Movements of halibut on the Canadian Atlantic coast. Fish. Res. Bd. Canada, Prog. Repts. Atl. Coast Stations (50), note 114:3-5.

Matsubara, Kiyomatsu (1943). Studies on the scorpaenoid fishes of Japan. Trans. Sigen Kaga Ku Kenkyusyo (Res. Inst. for Nat. Resources), (1-2) (In English).

————(1955). Fish morphology and hierarchy. I-III. Tokyo, Japan (In Japanese).

McKenzie, R. A. (1936). Some notes on the monkfish or angler (*Lophius piscatorius* Linn.). Can. Field-Nat. 50(4):55-56.

————(1939). The eastern Canadian maritime flatfishes. Fish. Res. Bd. Canada, Prog. Repts. Atl. Biol. Station (25), note 70:12-16.

————(1939a). Some marine fish and salp records. Proc. N.S. Inst. Sci. 20(1):13-20.

————(1940). Some marine records from Nova Scotian fishing waters. Proc. N.S. Inst. Sci. 20(2):42-46.

————(1943). The 1941-42 smelt catch of north-eastern New Brunswick. Fish. Res. Bd. Canada, Prog. Repts. Atl. Coast Stations (34), note 88:5-7.

————(1952). Greenland cod (*Gadus ogac*) in Miramichi Bay, New Brunswick. Copeia (3):199-200.

————(1953). Arctic or polar cod, *Boreogadus saida*, in Miramichi Bay, New Brunswick. Copeia (4):238-239.

McKenzie, R. A., and R. E. S. Homans (1937). Rare and interesting fishes and salps in the Bay of Fundy and off Nova Scotia. Proc. N.S. Inst. Sci. 19(3):277-281.

McKenzie, R. A., and W. B. Scott (1956). Silver hake, *Merluccius bilinearis*, in the Gulf of St. Lawrence. Copeia (2):111.

Mead, G. W. (1957). On the bramid fishes of the Gulf of Mexico. Zoologica 42(2):51-61.

Medcof, J. C., and J. S. MacPhail (1952). The winter flounder—a clam enemy. Fish. Res. Bd. Canada, Prog. Repts. Atl. Coast Stations (52), note 118:3-7.

Medcof, J. C., and F. S. Schiffman (1947). Recent records of the sea sunfish (*Mola mola* L.) in the Gulf of St. Lawrence. Acadian Nat. 2(7):63-66.

Miller, R. R., and D. S. Erdman (1948). The range and characters of *Synchirus gilli*, a remarkable cottid fish of the northeastern Pacific. Copeia (2):85-89.

Morrow, J. E., Jr. (1958). Names of the blue marlin and the black marlin. Bull. Mar. Sci. Gulf and Caribbean 8(4):356-359.

Morton, W. M., and R. R. Miller (1954). Systematic position of the lake trout, *Salvelinus namaycush*. Copeia (2):116-124.

Myers, G. S., and J. Bolke (1950). A new lumpsucker of the genus *Eumicrotremus* from the northeastern Atlantic. Stanford Ichth. Bull. 3(4):199-202.

Needler, A. W. (1930). The migrations of haddock and the inter-relationships of haddock populations in North American waters. Contrib. Can. Biol. Fish., New Ser. 6(10):241-314.

————(1931). Three haddock populations in North American waters. Biol. Bd. Canada, Prog. Repts. Atl. Biol. Stations (1):10-11.

————(1938). *Poronotus triacanthus* in Malpeque Bay, Prince Edward Island. Copeia (2):96.

————(1940). A preliminary list of the fishes of Malpeque Bay. Proc. N.S. Inst. Sci. 20(2):33-41.

Newfoundland Fishery Research Commission Reports, year 1931 (1932), Plymouth, England 1(4):1-110; year 1932 (1933), Plymouth, England 2(1):1-127; year 1933 (1934), Plymouth, England. 2(2):1-114.

Norman, J. R. (1931). Notes on the flatfishes (Heterosomata)—II. The generic name of the turbot and brill. Ann. Mag. Nat. Hist., 10 ser. 8:511-513.

————(1934). A systematic monograph of the flatfishes (Heterosomata). Vol. 1. London, pp. i-viii+1-459.

Partlo, J. M. (1955). Distribution, age, and growth of eastern Pacific albacore (*Thunnus alalunga* Gmelin). J. Fish. Res. Bd. Canada 11(1):35-60.

Pfaff, J. R. (1937). Fishes collected on the fifth Thule expedition. Rept. Fifth Thule Exped. 1921-1924, 2(7):1-20.

Phillips, J. B. (1957). A review of the rockfishes of California (Family Scorpaenidae). State of Calif. Dept. Fish and Game, Mar. Fish. Branch, Fish Bull. (104):1-158.

Pike, G. C. (1950). Stomach contents of whales caught off the coast of British Columbia. Fish. Res. Bd. Canada, Prog. Repts. Pac. Coast Stations (83):27-28.

————(1951). Lamprey marks on whales. J. Fish. Res. Bd. Canada 8(4):275-280.

Pinckard, W. F. (1957). Pomfret off the British Columbia coast. Fish. Res. Bd. Canada, Prog. Rept. Pac. Coast Stations (109):6-8.

Preble, E. A. (1908). A biological investigation of the Athabaska-Mackenzie region. U.S. Dept. Agric. (27), North American Fauna pp. 1-574. Fish, pp. 502-515.

Reid, Margaret E. (1929). The distribution and development of the cunner (*Tautogolabrus adspersus* Walbaum) along the eastern coast of Canada. Contrib. Can. Biol. Fish., New Ser. 4(27):431-441.

Richardson, J. (1836). Fauna Boreali-Americana. Part III (The Fish), i-xv, 1-327, pl. 74-97. London.

————(1854). Reptiles and fish. *In* The zoology of the voyage of H.M.S. Herald: 1-171. Part 3:143-171.

Riis-Cartsensen, E. (1931). The Godthaab expedition 1928. Report on the expedition. Medd. om Grønl. 78(1):105.

Roedel, P. M. (1953). Common ocean fishes of the California coast. State Calif. Dept. Fish and Game, Mar. Fish. Branch, Fish. Bull. (91):1-184.

Roedel, P. M., and J. E. Fitch (1952). The status of the carangid fishes *Trachurus* and *Decapterus* on the Pacific coast of Canada and the United States. Copeia (1):4-6.

Ross, James C. (1835). Fish (xlvi-liv). *In* Ross, John. Appendix to the narrative of a second voyage in search of a North-West Passage. London. A. W. Webster.

Rutenberg, E. P. (1954). Classification of the fishes of the terpug family (Hexagrammidae). Problems in Ichthyology, 2:151-155. English translation of the Russian by L. Lanz and N. J. Wilimovsky.

Salvadori, T. (1888). La date della publicazione della "Iconografia della fauna Italica," del Bonaparte, C. L. P. ed Indice delle specie illustrate in dette opera. Bull. dei Zool. ed Anat. Com. della R. Universita di Torino, 3(48):1-25 (In Italian).

Scattergood, L. W., and P. L. Goggins (1958). Unusual records of Gulf of Maine fishes. Maine Field Naturalist 14(2):40-43.

Schmidt, J. (1904). Monographie d'isle d'Anticosti. Poissons, pp. 282-287. Paris. 367 pp.

Schroeder, W. (1955). Reports on the results of exploratory otter-trawling along the continental shelf and slope between Nova Scotia and Virginia during the summers of 1952 and 1953. Deep-sea Research Suppl. to Vol. 3:358-372.

Schultz, L. P. (1936). Keys to the fishes of Washington, Oregon and closely adjoining regions. U. Wash. Pub. Biol. 2(4):103-228.

————(1937). Redescription of the capelin *Mallotus catervarius* (Pennant) of the North Pacific. Proc. U.S. Nat. Mus. 85(3029):13-20.

————(1938). Review of the fishes of the genera *Polypinus* and *Argyropelecus* (family Sternoptichidae), with descriptions of three new species. Proc. U.S. Nat. Mus. 86(3047):135-155.

Scott, D. M. (1952). The Greenland cod (*Gadus ogac*) in Cape Breton Island, Nova Scotia. Can. Field-Nat. 66(5):123-124.

Scott, W. B. (1958). A checklist of the freshwater fishes of Canada and Alaska. Roy. Ontario Mus. Div. Zool. Palæont., pp. 1-30.

————(1954). A comparative study of the yellowtail flounder from three Atlantic fishing areas. J. Fish. Res. Bd. Canada 11(3):171-197.

Simpson, T. (1843). Narrative of the discoveries on the north coast of America. Richard Bentley, London. 419 pages.

Sleggs, G. F. (1933). Observations upon the economic biology of the caplin (*Mallotus villosus* O. F. Müller). Rept. Newfoundland Fish. Res. Comm. 1(3):1-66.

Smitt, F. A. (1893-95). Revisor of B. Fries, C. U. Ekström, and C. Sundevall. A history of Scandinavian fishes. 2nd revised ed. Stockholm.

Soper, J. D. (1935). Fishes. pp. 131-132. *In* Bethune, W. C. Canada's eastern Arctic. Ottawa. Dept. Interior. 166 pages.

Sparks, M. I. (1929). The spawning and development of mackerel on the outer coast of Nova Scotia. Contrib. Can. Biol. Fish., New Ser. 4(28):443-452.

Sprules, W. M. (1952). The arctic char of the west coast of Hudson Bay. J. Fish. Res. Bd. Canada 9(1):1-15.

Stafford, J. (1912). On the fauna of the Atlantic coast. 2nd report.—Malpeque, 1903-1904. Contrib. Can. Biol. 1906-1910: 37-67.

————(1912a). On the fauna of the Atlantic coast of Canada. 3rd report—Gaspe, 1905-1906. Contrib. Can. Biol. V: 46-67.

Steele, D. H. (1957). The redfish (*Sebastes marinus* L.) in the western Gulf of St. Lawrence. J. Fish. Res. Bd. Canada 14(6):899-924.

Stewart, T. N. (1956). Danish-seining explorations in Newfoundland, Cape Breton areas. Bull. Fish. Res. Bd. Canada (108):1-26.

Sunde, L. A., and C. C. Lindsey (1958). Revised key to the rockfishes (Scorpaenidae) of British Columbia. Mus. Contrib. Inst. Fish., Univ. British Columbia, (1):1-6.

Svärdson, G. (1957). The coregonid problem VI. The palearctic species and their intergrades. Inst. Freshwater Res. Drottningholm (38):267-356.

Sverdrup, H. U., M. W. Johnson, and R. H. Fleming (1952). The oceans. Prentice-Hall, New York. pp. 1-1087.

Svetovidov, A. N. (1948). Fishes. Codlike fish. Fauna U.S.S.R. 9(4):1-222 (In Russian).

————(1952). Fishes. Herrings (Clupeidae). Fauna U.S.S.R., 2, part 2 (48):1-331 (In Russian).

Tarp, F. H. (1952). A revision of the family Embiotocidae (the surfperches). Calif. Fish and Game, Fish. Bull. (88):1-99.

Taylor, G. T. (1959). The occurrence of lesser lancet fish (*Anotopterus pharao* Zugmayer) in the northeast Pacific Ocean. Fish. Res. Bd. Canada, Prog. Rept. Pac. Coast Stations (113):10-12.

Templeman, W. (1944). The life-history of the spiny dogfish (*Squalus acanthias*) and the vitamin A values of dogfish liver oil. Newfoundland Dept. Nat. Res., Fish. Res. Bull. (15):1-102.

————(1948). The life-history of the caplin (*Mallotus villosus* O. F. Müller) in Newfoundland waters. Newfoundland Gov't. Lab., Bull. (Res.). (17):1-151.

Templeman, W., and A. M. Fleming (1954). European ling—first record from North American waters. J. Fish. Res. Bd. Canada 11(1):11-13.

————, and————(1956). The Bonavista long lining experiment, 1950-1953. Bull. Fish. Res. Bd. Canada (109):1-55.

Templeman, W., and E. J. Sandeman (1957). Two varieties of redfish in the Newfoundland area. Fish. Res. Bd. Canada, Prog. Repts. Atl. Coast Stations (66):20-22. Note (7).

Templeman, W., H. J. Squires, and A. M. Fleming (1957). Nematodes in the fillets of cod and other fishes in Newfoundland and neighbouring areas. J. Fish. Res. Bd. Canada 14(6):831-897.

Thompson, H. (1939). The occurrence and biological features of haddock in the Newfoundland area. Newfoundland Dept. Nat. Resources Res. Bull. (6):1-31.

————(1943). A biological and economic study of cod (*Gadus callarias* L.) in the Newfoundland area. Newfoundland Dept. Nat. Resources Res. Bull. (14):1-160.

Vladykov, V. D. (1933). Biological and oceanographic conditions in Hudson Bay. 9. Fishes from the Hudson Bay region (except the Coregonidae). Contrib. Can. Biol. Fish. New Ser. 8(2):13-61.

Vladykov, V. D. (1936). Occurrence of three species of anadromous fishes on the Nova Scotian Banks during 1935 and 1936. Copeia (3):168.

————(1945). Trois poissons nouveaux pour la province de Québec. Naturaliste Canadien 73(1, 2):27-39.

————(1949). Captures de poissons d'eau salée en eau douce et de poissons d'eau douce en eau salée dans le Québec. Ann. de l'A.C.F.A.S. 15:85.

————(1950). Movements of Quebec shad (*Alosa sapidissima*) as demonstrated by tagging. Quebec Dept. Fish. (30):121-135.

————(1951). The capture of the hagfish (*Myxine glutinosa*) in the Gulf of St. Lawrence, Quebec. Copeia (1):84.

————(1954). Taxonomic characters of the eastern North American chars. J. Fish. Res. Bd. Canada 11(6):904-932.

————(?) Fishes of Quebec—sturgeons. Quebec Dept. Fish. Album (5):1-11.

————(1959). The true taxonomic position of the lake trout *Cristivomer namaycush*). Trans. Northeast Wildlife Conf. 1958, p. 74.

Vladykov, V. D., and G. Beaulieu (1946). Etudes sur l'esturgeon (Acipenser) de la province de Québec. I. Naturaliste Canadien 73:143-204 and Contrib. Dept. Pêcheries Québec. No. 18.

Vladykov, V. D., and R. A. McKenzie (1935). The marine fishes of Nova Scotia. Proc. N.S. Inst. Sci. 19:17-113.

Vladykov, V. D., and J. L. Tremblay (1935). Liste des poissons recueillis pendant l'été 1934 par la station biologique de St-Laurent dans la région de Trois-Pistoles, P.Q. Naturaliste Canadien 62:77-82.

————, and————(1936). Nouvelles espèces de *Lycodes* (Pisces, Zoarcidae) du St-Laurent et revision de toutes les espèces du même genre de l'Atlantique occidental. Fauna et Flora Laurentianae (1):1-45.

Wakeham, W. (1898). Report of the expedition to Hudson Bay and Cumberland Gulf in the steamship *Diana* under the command of William Wakeham. Mar. and Fish., Canada, in the year 1897, pp. 80-82.

Walters, V. (1953). Notes on fishes from Prince Patrick and Ellesmere Islands, Canada. Am. Mus. Nov. (1643):1-17.

————(1953a). The fishes collected by the Canadian Arctic Expedition, 1913-18, with additional notes on the ichthyofauna of western arctic Canada. Canada Dept. Res. and Dev., Ann. Rept. Nat. Mus. 1951-52, Bull. (128):1-18.

————(1955). Fishes of western arctic America and eastern arctic Siberia. Bull. Am. Mus. Nat. Hist. 106(5):255-368.

Welander, A. D., D. L. Alverson, and P. Bergman (1957). Rare fishes from the eastern Pacific Ocean. Washington Dept. Fish., Fish. Res. Paper 2(1):60-66.

Whiteheaves, J. F. (1886). Catalogue of Canadian Pinnipedia, Cetacea, fishes, and marine invertebrata exhibited by the Department of Fisheries of the Dominion Government. Ottawa. pp. 1-42.

Wilder, D. G. (1952). Comparative study of anadromous and freshwater populations of brook trout (*Salvelinus fontinalis* (Mitchill)). J. Fish. Res. Bd. Canada 9(4):169-203.

Wilimovsky, N. J. (1951). The correct generic and family name of the deep sea hatchetfishes (*Sternoptyx* and *Sternoptychidae*). Copeia (3):247-248.

————(1954). List of the fishes of Alaska. Stanford Ichth. Bull. 4(5):279-294.

————(1956). A new name, *Lumpenus sagitta,* to replace *Lumpenus gracilis* (Ayres), for a northern blennioid fish (family Stichaeidae). Stanford Ichth. Bull. 7(2):23-24.

Wisner, R. L. (1959). Distribution and differentiation of the North Pacific myctophid fish. *Tarletonbeania taylori.* Copeia (1):1-7.

Wynne-Edwards, V. C. (1952). Freshwater vertebrates of the arctic and subarctic. Bull. Fish. Res. Bd. Canada (94):1-28.

INDEX TO FAMILIES, GENERA, AND SPECIES

abyssicola, Raja, 6
acanthias, Squalus, 6
Acanthocottus labradoricus, 44
Acipenser brevirostris, 8
ACIPENSERIDAE, 8
acipenserinus, Agonus, 3, 45
  Podothecus, 45
Acipenser medirostris, 8
  oxyrhynchus, 8
  sturio, 8
  transmontanus, 8
acrolepis, Coryphaenoides, 23
  Macrourus, 23
  Macrurus, 23
Acrotus willoughbyi, 51
aculeatus, Argyropelecus, 13
  Gasterosteus, 23, 24
acuticeps, Clinocottus, 41
adspersus, Tautogolabrus, 29
aeglefinus, Gadus, 21
  Melanogrammus, 21
aeneus, Myoxocephalus, 43
aenigmaticus, Icosteus, 51
aesculapius, Alepidosaurus, 15
  Alepisaurus, 15
aestivalis, Alosa, 8
  Pomolobus, 8
affine, Myctophum, 16
affinis, Hydrolagus, 8
aggregata, Cymatogaster, 29
agnostus, Lycodes, 34
AGONIDAE, 45
Agonopsis emmelane, 46
Agonus acipenserinus, 3, 45
alalunga, Thunnus, 37
alascana, Asterotheca, 45
alascanus, Sebastolobus, 40
albida, Makaira, 37
albula, Coregonus, 11
Albula vulpes, 8
ALBULIDAE, 8
Alepidosaurus, 15
alepidotus, Derepodichthys, 35
ALEPISAURIDAE, 15
Alepisaurus aesculapius, 15
  ferox, 15
ALEPOCEPHALIDAE, 9
aleutensis, Lyconectes, 33
aleutianus, Sebastes, 39
Allolumpenus hypochromus, 31
Alopias vulpinus, 4
Alosa aestivalis, 8
  pseudoharengus, 8
  sapidissima, 9
alpinus, Salvelinus, 10
Alutera schoepfi, 52
alutus, Sebastes, 38
americanus, Ammodytes, 35
  Hemitripterus, 42
  Lophius, 53
  Macrozoarces, 35
  Polyprion, 26
  Pseudopleuronectes, 51
  Roccus, 26
Ammodytes americanus, 35
  dubius, 36
  hexapterus, 36
  marinus, 35
  personatus, 36
  tobianus, 35
AMMODYTIDAE, 35
Amphistichus rhodoterus, 28
ampla, Makaira, 37
ampullaceus, Saccopharynx, 17
ANARHICHADIDAE, 30
Anarchichas denticulatus, 30
  latifrons, 30
  lupus, 30
  minor, 30
Anarrhichthys ocellatus, 30
Anchoa hepsetus, 9
anguilla, Anguilla, 18
Anguilla, anguilla, 18
  bostoniensis, 18
  rostrata, 17
anguillaris, Lumpenus, 32
ANGUILLIDAE, 17
Anoplagonus inermis, 45
Anoplarchus purpurescens, 32
Anoplopoma fimbria, 41
ANOPLOPOMATIDAE, 41
ANOTOPTERIDAE, 15
Anotopterus pharao, 15
Antimora rostrata, 19
  viola, 19
Apeltes quadracus, 23
Apodichthys flavidus, 32
APOGONIDAE, 26
Apristurus brunneus, 5
Aprodon corteziana, 33
aquosus, Rhombus, 49
  Scophthalmus, 49
Archosargus probatocephalus, 28
arctica, Electrona, 16
Arctogadus glacialis, 19
  pearyi, 19
argentea, Sphyraena, 26
argenteum, Hyperprosopon, 28
argenteus, Diretmus, 25
  Gaidropsarus, 21
Argentina silus, 12
  striata, 12

ARGENTINIDAE, 12
Argyreiosus vomer, 27
Argyropelecus aculeatus, 13
  olfersii, 13
  sladeni, 13
Aristostomias scintillans, iv
armatus, Leptocottus, 43
  Nematonurus, 23
artedii, Coregonus, 11
Artediellus atlanticus, 41
  uncinatus, 41
Artedius fenestralis, 41
  harringtoni, 41
  lateralis, 41
Ascelichthys rhodorus, 41
Asemichthys taylori, 3, 41
aspera, Limanda, 50
asper, Cottus, 42
asperrimum, Clidoderma, 49
Aspidophoroides güntheri, 45
  monopterygius, 45
  olrikii, 45
ASPIDOPHOROIDIDAE, 45
asprellus, Radulinus, 44
Asterotheca alascana, 45
  infraspinata, 46
  latifrons, 46
Atheresthes stomias, 49
ATHERINIDAE, 26
atlantica, Rhinochimaera, 8
atlanticus, Artediellus, 41
  Benthodesmus, 36
  Dibranchus, 53
  Liparis, 47
  Neoliparis, 47
  Tarpon, 8
atratus, Lycodes, 34
atropurpureus, Xiphister, 32
AULORHYNCHIDAE, 24
Aulorhynchus flavidus, 24
auratus, Mullus, 28
auriculatus, Sebastes, iv
australis, Remilegia, 52
autumnalis, Coregonus, 11
Auxis thazard, 36
Averruncus emmelane, 46
avocetta, Nemichthys, 18
Avocettina gilli, 18
ayresii, Lampetra, 4

bairdii, Macrourus, 23
  Mitchillina, 9
bairdi, Nezumia, 23
Balistes capriscus, 52
  carolinensis, 52
BALISTIDAE, 52
barbata, Pallasina, 46
Bathophilus flemingi, 13
Bathyagonus nigripinnis, 46
bathybii, Paraliparis, 48
bathybius, Embassichthys, iv
BATHYLAGIDAE, 12
Bathylagus benedicti, 12
  milleri, 12
  pacificus, 12
BATHYMASTERIDAE, 29
Bathymaster signatus, 29
Bathytroctes homopterus, 15
BATRACHOIDIDAE, 53
beanii, Melamphaes, 25
  Serrivomer, 18
beani, Triglops, 45
benedicti, Bathylagus, 12
Benthodesmus atlanticus, 36
  simonyi, 36
Benthosema glaciale, 15
berglax, Macrourus, 23
bicornis, Icelus, 43
bilinearis, Merluccius, 21
bilineata, Lepidopsetta, 50
bilobus, Blepsias, 43
  Histiocottus, 43
binoculata, Raja, 6
bison, Enophrys, 42
bispinosus, Gasterosteus, 24
Blennius polaris, 44
Blepsias bilobus, 43
  cirrhosus, 41
boa, Stomias, 14
borealis, Icelinus, 43
  Paralepis, 14
Boreogadus saida, 19, 20
Borostomias, sp. 13
bostoniensis, Anguilla, 18
BOTHIDAE, 49
Bothragonus swanii, 46
Bothrocara molle, 33
  mollis, 33
Brachyistius frenatus, 29
brachyptera, Remora, 52
Brama raii, 27
BRAMIDAE, 27
BRANCHIOSTEGIDAE, 26
braueri, Lampadena, 16
brevipes, Lycodes, 34
brevipinne, Ditrema, 29
brevirostris, Acipenser, 8
brevis, Paralepis, 14
Brevoortia tyrannus, 9
brosme, Brosme, 20
Brosme brosme, 20
Brosmophycis marginata, 35
BROTULIDAE, 35
brunneus, Apristurus, 5
bulbosus, Oneirodes, 53

caerulea, Sardinops, 9
californica, Tetranarce, 9
californiense, Myctophum, 17
callarias, Gadus, 20
callyodon, Liparis, 48
canis, Mustelus, 5
capriscus, Balistes, 52
CARANGIDAE, 27

Caranx crysos, 27
  hippos, 27
CARCHARHINIDAE, 5
Carcharhinus obscurus, 5
carcharias, Carcharodon, 4
Carcharias taurus, 5
Carcharodon carcharias, 4
Careproctus gilberti, 46
  longipinnis, 46
  melanurus, 46
  ovigerum, 47
  ranulus, 47
  reinhardi, 47
CARISTIIDAE, 25
Caristius macropus, 25
carminatus, Coelorhynchus, 23
carolinensis, Balistes, 52
carolinus, Prionotus, 40
castaneum, Macrostoma, 17
castaneus, Notoscopelus, 17
catervarius, Mallotus, 12
caurinum, Mylocheilus, 17
caurinus, Sebastes, 39
cavernosus, Melamphaes, 25
CENTROLOPHIDAE, 38
Centroscyllium fabricii, 5
Centroscymnus coelolepis, 5
cepedianus, Notorhynchus, 4
cephalus, Mugil, 26
Ceratias holboelli, 53
CERATIIDAE, 53
Ceratocanthus schoepfi, 52
Ceratoscopelus madeirensis, 15
  townsendi, iv
cerdale, Scytalina, 35
Cetorhinus maximus, 4
Chaetodon ocellatus, 28
CHAETODONTIDAE, 28
chalcogrammus, Theragra, 22
Chalinura filifera, 22
  murrayi, 22
  occidentalis, 22
chamaeleonticeps, Lopholatilus, 26
CHAULIODONTIDAE, 14
Chauliodus macouni, 14
  sloani, 14
chemnitzi, Notacanthus, 19
chesteri, Ficus, 20
  Phycis, 20
  Urophycis, 20
Chiasmodon niger, 30
CHIASMODONTIDAE, 30
chiliensis, Sarda, 36
Chilomycterus schoepfi, 52
Chimaera monstrosa, 7
CHIMAERIDAE, 7
Chirolophis ascanii, 31
  galerita, 31
  nugator, 31
  polyactocephalus, 31
chirus, Phytichthys, 32
Chitonotus pugetensis, 41
chuss, Urophycis, 22
ciliatus, Monacanthus, 52
cimbricus, Enchelyopus, 20
cimbrius, Enchelyopus, 20
  Rhinonemus, 20
cirrhosus, Blepsias, 41
Citharichthys sordidus, 49
  stigmaeus, 49
clarkii, Salmo, 10
Clevelandia ios, 38
Clidoderma asperrimum, 49
CLINIDAE, 30
Clinocottus acuticeps, 41
  embryum, 41
  globiceps, 42
clupeaformis, Coregonus, 11
Clupea harengus, 9
  pallasii, 9
CLUPEIDAE, 8
cocco, Gonichthys, 16
coccoi, Rhinoscopelus, 16
coelolepis, Centroscymnus, 5
Coelorhynchus carminatus, 23
coenosus, Pleuronichthys, 51
cognatus, Cottus, 42
colias, Pneumatophorus, 37
colliei, Hydrolagus, 8
Cololabis saira, 19
Conger oceania, 18
CONGRIDAE, 18
copei, Paraliparis, 48
  Xenodermichthys, 15
Coregonus albula, 11
  artedii, 11
  autumnalis, 11
  clupeaformis, 11
  kennicotti, 11
  laurettae, 11
  nasus, 11
  oxyrhynchus, 11
  pusillus, 11
  sardinella, 11
  tullibee, 11
corinum, Hexanchus, 4
corteziana, Aprodon, 33
coruscans, Notolepis, iv
Coryphaena hippurus, 28
CORYPHAENIDAE, 28
Coryphaenoides acrolepis, 23
Coryphaenoides rupestris, 23
Coryphopterus nicholsii, 38
COTTIDAE, 41
Cottunculus microps, 42
  thompsonii, 42
Cottus asper, 42
  cognatus, 42
  porosus, 44
crameri, Sebastes, 39
crenularis, Tarletonbeania, 17
Cristivomer, 10
crocodilus, Lampanyctus, 16
crumenophthalmus, Trachurops, 27
Cryptacanthodes maculatus, 33

CRYPTACANTHODIDAE, 33
crysos, Caranx, 27
cuvieri, Tetragonurus, 37
CYBIIDAE, 36
cyclolepis, Dolloa, 23
Cyclopterichthys ventricosus, 47
CYCLOPTERIDAE, 46
Cyclopterus lumpus, 47
cyclopus, Liparis, 48
cyclostigma, Liparis, 48
Cyclothone microdon, 13
  signata, 13
cylindraceum, Prosopium, 11
Cymatogaster aggregata, 29
cynoglossus, Glyptocephalus, 50
Cynoscion nobilis, 28
Cynoscion regalis, 28
CYPRINIDAE, 17
CYPRINODONTIDAE, 25
Cypselurus furcatus, 19

DACTYLOPTERIDAE, 49
dactylopterus, Sebastes, 38
Dactylopterus volitans, 49
dallii, Sebastes, 39
Damalichthys, 29
Damalichthys vacca, 29
Dasyatis dipterurus, 7
Dasycottus setiger, 42
deani, Paraliparis, 49
decagonus, Leptagonus, 46
decagrammus, Hexagrammos, 40
Decapterus macarellus, 27
  polyaspis, 27
decurrens, Pleuronichthys, 51
Delolepis gigantea, 33
dennyi, Liparis, 48
dentatus, Neoscopelarchoides, 14
  Paralichthys, 49
denticulatus, Anarhichas, 30
  Lycichthys, 30
denudatum, Gonostoma, 13
DEREPODICHTHYIDAE, 35
Derepodichthys alepidotus, 35
derjugini, Eumicrotremus, 47
detrisus, Gymnocanthus, 42
diaphana, Sternoptyx, 13
diaphanes, Raja, 7
diaphanus, Fundulus, 25
Diaphus effulgens, 16
  rafinesquii, 16
  theta, 16
diapterus, Furcimanus, 33
  Lycodes, 33
Dibranchus atlanticus, 53
diego, Pneumatophorus, 37
dignabilis, Pseudopleuronectes, 51
dilatus, Spirinchus, 12
DIODONTIDAE, 52
diplana, Sphyrna, 5
diploproa, Sebastes, 39
dipterurus, Dasyatis, 7
DIRETMIDAE, 25
Diretmus argenteus, 25
Ditrema brevipinne, 29
ditropis, Lamna, 5
Dolloa cyclolepis, 23
dubius, Ammodytes, 35, 36
ductor, Naucrates, 27

ECHENEIDAE, 52
Echeneis naucrates, 52
Echiostoma, sp. 13
effulgens, Diaphus, 16
eigenmanni, Rimicola, 53
elassodon, Hippoglossoides, 50
Electrona arctica, 16
  thompsoni, 16
Elginus gracilis, 20
  navaga, 20
  sp., 21
elongatus, Notoscopelus, 17
  Ophiodon, 40
  Sebastes, 39
Embassichthys bathybius, 3
Embiotoca lateralis, 29
EMBIOTOCIDAE, 28
embryum, Clinocottus, 41
emmelane, Agonopsis, 46
  Averruncus, 46
Enchelyopus cimbricus, 20
  cimbrius, 20
ENGRAULIDAE, 9
Engraulis mordax, 9
Enophrys bison, 42
ensis, Gaidropsarus, 21
Entosphenus japonicus, 4
  tridentatus, 4
Eopsetta jordani, 49
eperlanus, Osmerus, 12
Epinephelus morio, 26
Eptatretus stoutii, 4
ERILEPIDIDAE, 41
Erilepis zonifer, 41
erinacia, Raja, 6
eschrichtii, Oneirodes, 53
Escolar violaceus, 36
esmarki, Lycodes, 34
ESOCIDAE, 13
Esox lucius, 13
Etmopterus princeps, 5
Etrumeus sadina, 9
Eucalia inconstans, 23
Eumesogrammus praecisus, 31
Eumicrotremus derjugini, 47
  orbis, 47
  pacificus, 47
  spinosus, 47
  spinus, 47
  terraenovae, 47
EURYPHARYNGIDAE, 17
Eurypharynx pelecanoides, 17
Euthynnus pelamis, 36
evides, Plectrobranchus, iv

- *evolans, Prionotus*, 40
- *exilis, Lyopsetta*, 51
- EXOCOETIDAE, 19

- *fabricii, Centroscyllium*, 5
  - *Gadus*, 20
- *fabricii, Liparis*, 48
  - *Lumpenus*, 31
  - *Macrourus*, 23
- *fasciata, Pholis*, 32
- *fasciola, Idiacanthus*, 14
- *fenestralis, Artedius*, 41
- *ferox, Alepisaurus*, 15
  - *Plagyodus*, 15
  - *Stomias*, 14
- *ferruginea, Limanda*, 50
- *Ficus chesteri*, 20
- *fierasfer, Lycodapus*, 33
- *filamentosus, Icelinus*, 43
- *filifera, Chalinura*, 22
- *fimbria, Anoplopoma*, 41
- *Fistularia tabacaria*, 24
- FISTULARIIDAE, 24
- *flagellum, Saccopharynx*, 17
- *flavidus, Apodichthys*, 32
  - *Aulorhynchus*, 24
  - *Sebastes*, 39
- *flemingi, Bathophilus*, 13
- *florae, Liparis*, 48
- *fluviatilis, Lampetra*, 4
- *fontinalis, Salvelinus*, 10
- *frenatus, Brachyistius*, 29
  - *Micrometrus*, 29
- *frigidus, Lycodes*, 34
- *fucensis, Liparis*, 48
- *fucorum, Xererpes*, 33
- *Fundulus diaphanus*, 25
  - *heteroclitus*, 25
- *funebris, Gymnothorax*, 18
- *furcatus, Cypselurus*, 19
  - *Phanerodon*, 29
- *Furcimanus diapterus*, 33
- *fuscum, Siphostoma*, 24
- *fuscus, Syngnathus*, 24
- *fyllae, Raja*, 6

- GADIDAE, 19
- *Gadus aeglefinus*, 21
  - *callarias*, 20
  - *fabricii*, 20
  - *macrocephalus*, 20
  - *morhua*, 20, 21
  - *morrhua*, 20
  - *ogac*, 20, 21
  - *tomcod*, 22
- *Gaidropsarus argenteus*, 21
  - *ensis*, 21
  - *vulgaris*, 21
- *gairdnerii, Salmo*, 10
- *galeatus, Gymnocanthus*, 42
- *Galeorhinus galeus*, 5
  - *zyopterus*, 5
- *galerita, Chirolophis*, 31
- *galeus, Galeorhinus*, 5
- GASTEROSTEIDAE, 23
- *Gasterosteus aculeatus*, 23
  - *bispinosus*, 24
  - *wheatlandi*, 24
- *gelatinosum, Melanostigma*, 35
- *gemmifer, Lampanyctus*, 16
- GEMPYLIDAE, 36
- *Genyonemus lineatus*, 28
- *Gibbonsia metzi*, 30
  - *montereyensis*, 30
- *gigantea, Delolepis*, 33
- *gilberti, Careproctus*, 46
- *Gilbertidia sigalutes*, 45
- *gilli, Avocettina*, 18
  - *Synchirus*, 44
- *glaciale, Benthosema*, 15
  - *Myctophum*, 15
- *glacialis, Arctogadus*, 19
  - *Liopsetta*, 50
- *gladius, Xiphias*, 37
- *glauca, Prionace*, 5
- *globiceps, Clinocottus*, 42
- *glutinosa, Myxine*, 4
- *Glyptocephalus cynoglossus*, 50
  - *zachirus*, 50
- GOBIESOCIDAE, 53
- *Gobiesox maendricus*, 53
- GOBIIDAE, 38
- *Gonichthys cocco*, 16
- *Gonostoma denudatum*, 13
- GONOSTOMATIDAE, 15
- *goodei, Ptilichthys*, 35
- *gorbuscha, Oncorhynchus*, 9
- *gracilis, Elginus*, 20
  - *Lumpenus*, 32
- *Grammatostomias*, sp. 13
- *granulata, Raja*, 6
- *greeni, Polypera*, 49
- *griseolineatus, Syngnathus*, 24
- *griseus, Hexanchus*, 4
- *groenlandicus, Himantolophus*, 53
  - *Myoxocephalus*, 44
- *guentheri, Lampanyctus*, 16
- *gunnellus, Pholis*, 32
- *güntheri, Aspidophoroides*, 45
- *Gymnelis stigma*, 33
  - *viridis*, 33
- *Gymnelopsis stigma*, 34
- *Gymnocanthus detrisus*, 42
  - *galeatus*, 42
  - *pistilliger*, 42
  - *tricuspis*, 42
- *Gymnothorax funebris*, 18

- *hamatus, Icelus*, 43
- *harengus, Clupea*, 9
- *harringtoni, Artedius*, 41
- *Harriotta raleighana*, 8
- *hemilepidotus, Hemilepidotus*, 42
- *Hemilepidotus hemilepidotus*, 42
  - *spinosus*, 42

HEMIRHAMPHIDAE, 19
Hemitripterus americanus, 42
hepsetus, Anchoa, 9
herschelii, Makaira, 37
herschelinus, Liparis, 48
heteroclitus, Fundulus, 25
Heterostichus rostratus, 30
hexacornis, Oncocottus, 43, 44
HEXAGRAMMIDAE, 40
Hexagrammos decagrammus, 40
  stelleri, 40
  superciliosus, 40
HEXANCHIDAE, 4
Hexanchus corinum, 4
  griseus, 4
hexapterus, Ammodytes, 36
HIMANTOLOPHIDAE, 53
Himantolophus groenlandicus, 53
Hippocampus hudsonius, 25
Hippoglossina oblongus, 49
Hippoglossoides elassodon, 50
  platessoides, 50
hippoglossoides, Reinhardtius, 51
hippoglossus, Hippoglossus, 50
Hippoglossus hippoglossus, 50
  stenolepis, 50
  vulgaris, 50
hippos, Caranx, 27
hippurus, Coryphaena, 28
hispidus, Monacanthus, 52
Histiocottus bilobus, 43
HISTIOPHORIDAE, 37
HISTIOPTERIDAE, 28
holboelli, Ceratias, 53
Holoconotus rhodoterus, 28
holotrachys, Macrourus, 23
homopterus, Bathytroctes, 15
hudsonius, Hippocampus, 25
humboltii, Myctophum, 17
Hydrolagus affinis, 7
  colliei, 8
hyperborea, Raja, 6
Hyperprosopon argenteum, 28
hypochromus, Allolumpenus, 31
Hypomesus olidus, 11
  pretiosus, 11
Hyporhamphus unifasciatus, 19
Hypsagonus quadricornis, 46

Icelinus borealis, 43
  filamentosus, 43
  tenuis, 43
Icelus bicornis, 43
  hamatus, 43
  spatula, 43
Icichthys lockingtoni, 38
ICOSTEIDAE, 51
Icosteus aenigmaticus, 51
IDIACANTHIDAE, 14
Idiacanthus fasciola, 14
inconstans, Eucalia, 23
inermis, Anoplagonus, 45
infraspinata, Asterotheca, 46
Inopsetta ischyra, iv
introniger, Sebastes, 39
Iopsetta isolepis, 50
ios, Clevelandia, 38
ischara, Inopsetta, iv
isolepis, Iopsetta, 50
ISTIOPHORIDAE, 37
Isurus nasus, 5

japonicus, Entosphenus, 4
  Scomber, 37
jenseni, Raja, 6
Jordania zonope, 43
jordani, Eopsetta, 49
  Ronquilus, 30
jugoricus, Lycodes, 34

Katsuwonus pelamis, 36
kaupii, Synaphobranchus, 18
kennicotti, Coregonus, 11
keta, Oncorhynchus, 9
kincaidii, Raja, 6
kincaidi, Malacottus, 43
kisutch, Oncorhynchus, 10
koefoedi, Liparis, 48
krøyeri, Paralepis, 14

labradoricus, Acanthocottus, 44
LABRIDAE, 29
laeta, Pholis, 32
laevigatus, Lophius, 53
laevis, Raja, 6
Lamna ditropis, 5
  nasus, 5
LAMNIDAE, 4
Lampadena braueri, 16
Lampanyctus crocodilus, 16
  gemmifer, 16
  guentheri, 16
  leucopsarus, 16
  regalis, 16
  ritteri, iv
Lampetra ayresii, 4
  fluviatilis, 4
lampretaeformis, Lumpenus, 31
LAMPRIDAE, 25
Lampris regius, 25
lateralis, Artedius, 41
lateralis, Embiotoca, 29
  Taeniotoca, 29
latifrons, Anarhichas, 30
  Asterotheca, 46
  Xenopyxis, 46
LATILIDAE, 26
latipinnis, Zaniolepis, 41
laurettae, Coregonus, 11
lavalaei, Lycodes, 34
Lepidogobius lepidus, 38
Lepidopsetta bilineata, 50
lepidus, Lepidogobius, 38
LEPISOSTEIDAE, 8
Lepisosteus osseus, 8
Leptagonus decagonus, 46

Leptoclinus maculatus, 31
Leptocottus armatus, 43
Lestidium ringens, iv
Leucichthys sardinella, 11
leucichthys, Stenodus, 11
leucopsarus, Lampanyctus, 16
Leuroglossus stilbius, 12
Limanda aspera, 50
    ferruginea, 50
lineatus, Genyonemus, 28
lineolata, Sarda, 36
Liopsetta glacialis, 50
    putnami, 50
LIPARIDAE, 46
liparis, Liparis, 48
Liparis atlanticus, 47
    callyodon, 48
    cyclopus, 48
    cyclostigma, 48
    dennyi, 48
    fabricii, 48
    florae, 48
    fucensis, 48
    herschelinus, 48
    koefoedi, 48
    liparis, 48
    major, 48
    montagui, 47
    pulchellus, 48
    rutteri, 48
    tunicatus, 48
lockingtoni, Icichthys, 38
longipinnis, Careproctus, 46
    Taractes, 27
longirostris, Lumpenella, 31
LOPHIIDAE, 53
Lophius americanus, 53
    laevigatus, 53
    piscatorius, 53
Lopholatilus chamaeleonticeps, 26
Lophopsetta maculata, 49
lota, Lota, 21
Lota lota, 21
lucius, Esox, 13
lugubris, Melamphaes, 25
Lumpenella longirostris, 31
Lumpenus anguillaris, 32
    fabricii, 31
    gracilis, 32
    lampretaeformis, 31
    lumpretaeformis, 32
    medius, 32
    sagitta, 32
lumpretaeformis, Lumpenus, 32
lumpus, Cyclopterus, 47
lupus, Anarhichas, 30
Lycenchelys paxillus, 33
    sarsii, 33
    verrillii, 33
Lycichthys denticulatus, 40
Lycocara parii, 33
Lycodalepis sp., 46
Lycodapus fierasfer, 33
    mandibularis, 33
Lycodes agnostus, 34
    atratus, 34
    brevipes, 34
    diapterus, 33
    esmarki, 34
    frigidus, 34
    jugoricus, 34
    lavalaei, 34
    mucosus, 34
Lycodes palearis, 34
    pallidus, 34
    perspicillum, 34
    polaris, 34
    reticulatus, 34
    terraenovae, 34
    turneri, 34
    vachonii, 35
    vahlii, 35
Lycodopsis pacifica, 35
Lyconectes aleutensis, 33
Lyopsetta exilis, 51

macarellus, Decapterus, 35
Macdonaldia rostrata, 19
macellus, Prionistius, 44
    Triglops, 44
mackenzii, Stenodus, 11
macouni, Chauliodus, 14
macrocephalus, Gadus, 20
Macropinna microstoma, 12
MACROPINNIDAE, 14
macropus, Caristius, 25
    Tactostoma, 14
Macrostoma castaneum, 17
    quercinum, 17
MACROURIDAE, 22
Macrourus acrolepis, 23
Macrourus bairdii, 23
    berglax, 23
    fabricii, 23
    holotrachys, 23
    rupestris, 23
Macrozoarces americanus, 35
Macrurus, 23
maculata, Lophopsetta, 49
maculatus, Cryptacanthodes, 33
    Leptoclinus, 31
    Notorhynchus, 4
    Sphoeroides, 52
maculosus, Oligocottus, 44
madeirensis, Ceratoscopelus, 15
maendricus, Gobiesox, 53
    Sicyogaster, 53
major, Liparis, 48
Makaira albida, 37
    ampla, 37
    herschelii, 37
Malacosteus niger, 14
Malacottus kincaidi, 43
maliger, Sebastes, 39
Mallotus catervarius, 12

    villosus, 12
malma, Salvelinus, 10
Mancalias tentaculatus, 53
mandibularis, Lycodapus, 33
margaritifer, Notoscopelus, 17
marginata, Brosmophycis, 35
marinus, Ammodytes, 35
    Petromyzon, 4
    Sebastes, 39
marmoratus, Scorpaenichthys, 44
Maurolicus mülleri, 13
    pennanti, 13
maximus, Cetorhinus, 2
medirostris, Acipenser, 8
medius, Lumpenus, 32
MEGALOPIDAE, 8
Melamphaes beanii, 25
    cavernosus, 25
    lugubris, 25
    rugosus, 26
MELAMPHAIDAE, 25
Melanogrammus aeglefinus, 21
melanops, Sebastes, 39
melanostictus, Psettichthys, 51
Melanostigma gelatinosum, 35
MELANOSTOMIATIDAE, 14
melanurus, Careproctus, 46
menidia, Menidia, 26
Menidia menidia, 26
    notata, 26
Merluccius bilinearis, 21
    productus, 21
metzi, Gibbonsia, 30
microcephalus, Somniosus, 6
microdon, Cyclothone, 13
Microgadus proximus, 21
    tomcod, 22
Micromesistius poutassou, 22
Micrometrus frenatus, 29
microps, Cottunculus, 42
microstoma, Macropinna, 12
Microstomus pacificus, 51
milleri, Bathylagus, 12
miniatus, Sebastes, 39
minor, Anarhichas, 30
Mitchillina bairdii, 9
mola, Mola, 52
Mola mola, 52
MOLIDAE, 52
molle, Bothrocara, 33
mollis, Bothrocara, 33
    Raja, 7
molva, Molva, 22
Molva molva, 22
MONACANTHIDAE, 52
Monacanthus ciliatus, 52
    hispidus, 52
monopterygius, Aspidophoroides, 45
monstrosa, Chimaera, 8
montagui, Liparis, 70
montereyensis, Gibbonsia, 30
mordax, Engraulis, 9
    Osmerus, 12
morhua, Gadus, 20, 21
morrhua, Gadus, 20
morio, Epinephelus, 26
mucosus, Lycodes, 34
    Xiphister, 32
Mugil cephalus, 26
MUGILIDAE, 26
mülleri, Maurolicus, 13
MULLIDAE, 28
Mullus auratus, 28
multipunctata, Photonectops, 14
Muraena pinnata, 18
MURAENIDAE, 18
murrayi, Chalinura, 22
muscarum, Rimicola, 53
Mustelus canis, 5
MYCTOPHIDAE, 15
Myctophum, 15, 16
Myctophum affine, 16
    californiense, 17
    glaciale, 15
    humboltii, 17
    nitidulum, 16
    punctatum, 17
Mylocheilus caurinum, 17
Myoxocephalus aeneus, 43
    groenlandicus, 44
    octodecemspinosus, 43
    polyacanthocephalus, 43
    quadricornis, 43
    scorpioides, 44
    scorpius, 44
    verrucosus, 44
mystinus, Sebastes, 39
Myxine glutinosa, 4
MYXINIDAE, 4

namaycush, Salvelinus, 10
nasus, Coregonus, 11
    Isurus, 5
    Lamna, 5
Naucrates ductor, 27
naucrates, Echeneis, 52
Nautichthys oculofasciatus, 44
navaga, Elginus, 20
nebulosus, Sebastes, 39
Nectoliparis pelagicus, 48
Nematonurus armatus, 23
NEMICHTHYIDAE, 18
Nemichthys avocetta, 18
    scolopaceus, 18
Neoliparis atlanticus, 47
Neoscopelarchoides dentatus, 14
nerka, Oncorhynchus, 10
Nezumia bairdi, 23
nicholsii, Coryphopterus, 38
    Rhinogobiops, 38
nicholsi, Stomioides, 14
niger, Chiasmodon, 30
    Malacosteus, 14
nigripinnis, Bathyagonus, 46
nigrocinctus, Sebastes, 39
nitidulum, Myctophum, 16

nobiliana, Torpedo, 7
nobilis, Cynoscion, 28
    Polymixia, 25
NOMEIDAE, 38
NOTACANTHIDAE, 19
Notacanthus chemnitzi, 19
    phasganorus, 19
notata, Menidia, 26
notatus, Porichthys, 53
Notolepis coruscans, 3
Notorhynchus cepedianus, 4
    maculatus, 4
Notoscopelus castaneus, 17
    elongatus, 17
    margaritifer, 17
    resplendens, 17
nugator, Chirolophis, 31
nybelini, Triglops, 45

oblongus, Hippoglossina, 49
    Paralichthys, 49
obscurus, Carcharhinus, 5
Occa verracosa, 46
occidentalis, Chalinura, 22
oceania, Conger, 18
ocellata, Raja, 7
    Zenopsis, 25, 26
ocellatus, Anarrhichthys, 30
    Chaetodon, 28
octodecemspinosus, Myoxocephalus, 43
oculofasciatus, Nautichthys, 44
Odontopyxis trispinosus, 46
ogac, Gadus, 20, 21
OGOCEPHALIDAE, 53
olfersii, Argyropelecus, 13
olidus, Hypomesus, 11
Oligocottus maculosus, 44
    rimensis, 44
    snyderi, 44
olrikii, Aspidophoroides, 45
ommatistius, Triglops, 45
Oncocottus hexacornis, 43, 44
    quadricornis, 43, 44
Oncorhynchus gorbuscha, 9
    keta, 9
    kisutch, 10
    nerka, 10
    tshawytscha, 10
Oneirodes bulbosus, 53
    eschrichtii, 53
ONEIRODIDAE, 53
onitis, Tautoga, 29
Ophidium stigma, 45
Ophiodon elongatus, 40
OPHIODONTIDAE, 58
orbis, Eumicrotremus, 47
ornata, Pholis, 32
OSMERIDAE, 11
Osmerus eperlanus, 12
    mordax, 12
osseus, Lepisosteus, 8
ovigerum, Careproctus, 47
Oxylebius pictus, 41
oxyrhynchus, Acipenser, 8
    Coregonus, 11

pacifica, Lycodopsis, 35
pacificus, Bathylagus, 12
    Eumicrotremus, 69
    Microstomus, 51
    Somniosus, 6
    Thaleichthys, 12
palearis, Lycodes, 34
Palinurichthys perciformis, 38
pallasii, Clupea, 9
Pallasina barbata, 46
pallidus, Lycodes, 34
Palometa simillima, 53
paradoxus, Psychrolutes, 45
PARALEPIDIDAE, 14
Paralepis borealis, 14
    brevis, 14
    krøyeri, 14
    rissoi, 14
Paralichthys dentatus, 49
    oblongus, 49
Paraliparis bathybii, 48
    copei, 48
    deani, 49
parasiticus, Simenchelys, 18
Parophrys vetulus, 51
parii, Lycocara, 33
paucispinis, Sebastes, 40
paxillus, Lycenchelys, 33
pearyi, Arctogadus, 23
peckianus, Syngnathus, 24
pelagicus, Nectoliparis, 48
pelamis, Euthynnus, 36
    Katsuwonus, 36
pelecanoides, Eurypharynx, 17
pennanti, Maurolicus, 13
Peprilus simillimus, 37
perciformis, Palinurichthys, 38
PERISTEDIIDAE, 40
personatus, Ammodytes, 36
perspicillum, Lycodes, 46
Petromyzon marinus, 4
PETROMYZONTIDAE, 4
Phanerodon furcatus, 29
pharao, Anotopterus, 15
phasganorus, Notacanthus, 19
PHOLIDAE, 32
Pholis fasciata, 32
    gunnellus, 32
    laeta, 32
    ornata, 32
Photonectops multipunctata, 14
Phycis chesteri, 24
Phytichthys chirus, 32
pictus, Oxylebius, 41
pingelii, Triglops, 45
pinnata, Muraena, 22
pinnatus, Synaphobranchus, 22

pinniger, Sebastes, 40
piscatorius, Lophius, 78
pistilliger, Gymnocanthus, 42
Plagyodus, 15
Plagyodus ferox, 15
platessoides, Hippoglossoides, 50
Platichthys stellatus, 51
Plectrobranchus evides, iv
Pleuronectes stellatus, 51
PLEURONECTIDAE, 49
Pleuronichthys coenosus, 51
    decurrens, 51
Pneumatophorus diego, 37
    colias, 37
Podothecus acipenserinus, 45
polaris, Blennius, 46
    Lycodes, 46
Polistotrema, 4
Pollachius virens, 22
polyacanthocephalus, Myoxocephalus, 43
Polyacanthonotus rostratus, 19
polyactocephalus, Chirolophis, 31
polyaspis, Decapterus, 36
POLYMIXIIDAE, 33
Polymixia nobilis, 25
Polypera greeni, 49
Polyprion americanus, 26
POMATOMIDAE, 27
Pomatomus saltatrix, 27
Pomolobus, 8
Porichthys notatus, 53
Poroclinus rothrocki, 32
Poronotus triacanthus, 38
porosus, Cottus, 64
poutassou, Micromesistius, 22
praecisus, Eumesogrammus, 31
pretiosus, Hypomesus, 13
    Ruvettus, 36
princeps, Etmopterus, 4
    Taractes, 27
Prionace glauca, 5
Prionistius macellus, 44
Prionotus carolinus, 40
    evolans, 40
probatocephalus, Archosargus, 28
productus, Merluccius, 21
proriger, Sebastes, 40
Prosopium cylindraceum, 11
proximus, Microgadus, 21
Psettichthys melanostictus, 51
pseudoharengus, Alosa, 8
Pseudopentaceros richardsoni, 28
Pseudopleuronectes americanus, 51
    dignabilis, 51
Psychrolutes paradoxus, 45
PSYCHROLUTIDAE, 45
PTILICHTHYIDAE, 35
Ptilichthys goodei, 35
pugetensis, Chitonotus, 41
pulchellus, Liparis, 48
punctatum, Myctophum, 17
punctatus, Stichaeus, 31
pungitius, Pungitius, 24
Pungitius pungitius, 24
pungitius, Pygosteus, 24
purpurecens, Anoplarchus, 32
pusillus, Coregonus, 11
putnami, Liopsetta, 50
Pygosteus pungitius, 24

quadracus, Apeltes, 23
quadricornis, Hypsagonus, 46
    Myoxocephalus, 43, 44
    Oncocottus, 43, 44
quercinum, Macrostoma, 17

radiata, Raja, 7
Radulinus asprellus, 44
    taylori, iv
rafinesquii, Diaphus, 16
raii, Brama, 27
Raja abyssicola, 6
    binoculata, 6
    diaphanes, 7
    erinacia, 6
    fyllae, 6
    granulata, 6
    hyperborea, 6
    jenseni, 6
    kincaidii, 6
    laevis, 6
    mollis, 7
    ocellata, 7
    radiata, 7
    rhina, 7
    scabrata, 7
    senta, 7
    spinicauda, 7
    stabuliformis, 7
    stellulata, 7
RAJIDAE, 6
raleighana, Harriotta, 8
ranulus, Careproctus, 47
regalis, Cynoscion, 28
    Lampanyctus, 16
regius, Lampris, 25
    Urophycis, 22
reinhardi, Careproctus, 47
Reinhardtius hippoglossoides, 51
Remilegia australis, 52
remora, Remora, 52
Remora remora, 52
    brachyptera, 52
reticulatus, Lycodes, 34
resplendens, Notoscopelus, 17
rexsalmonorum, Trachypterus, 25
Rhacochilus vacca, 29
RHAMPHOCOTTIDAE, 41
Rhamphocottus richardsoni, 44
Rhectogramma sherborni, 26
rhina, Raja, 7
Rhinochimaera atlantica, 8
RHINOCHIMAERIDAE, 8
Rhinogobiops nicholsii, 38
Rhinonemus cimbrius, 20

Rhinoscopelus coccoi, 16
rhodorus, Ascedichthys, 41
rhodoterus, Amphistichus, 28
    Holoconotus, 28
Rhombus aquosus, 49
richardsoni, Pseudopentaceros, 28
    Rhamphocottus, 44
rimensis, Oligocottus, 44
Rimicola eigenmanni, 53
    muscarum, 53
ringens, Lestidium, iv
rissoi, Paralepis, 14
ritteri, Lampanyctus, 3
Roccus americanus, 26
    saxatilis, 26
Ronquilus jordani, 30
rosaceus, Sebastes, 40
rostrata, Anguilla, 17
    Antimora, 19
    Macdonaldia, 19
rostratus, Heterostichus, 30
    Polyacanthonotus, 19
rothrocki, Poroclinus, 32
ruberrimus, Sebastes, 40
rubrivinctus, Sebastes, 40
rugosus, Melamphaes, 25
rupestris, Coryphaenoides, 23
    Macrourus, 23
rutteri, Liparis, 48
Ruvettus pretiosus, 36

SACCOPHARYNGIDAE, 17
Saccopharynx ampullaceus, 17
    flagellum, 17
sadina, Etrumeus, 9
sagax, Sardinops, 9
sagitta, Lumpenus, 32
saida, Boreogadus, 19
saira, Cololabis, 19
salar, Salmo, 10
saliens, Thunnus, 37
Salmo clarkii, 10
    gairdnerii, 10
    salar, 10
    trutta, 10
SALMONIDAE, 9
saltatrix, Pomatomus, 27
Salvelinus alpinus, 10
    fontinalis, 10
    malma, 10
    namaycush, 10
sapidissima, Alosa, 9
sarda, Sarda, 36, 37
Sarda, chiliensis, 36
    lineolata, 36
    sarda, 36, 37
sardinella, Coregonus, 11
    Leucichthys, 11
Sardinops caerulea, 9
    sagax, 9
sarsii, Lycenchelys, 33
saurus, Scomberesox, 19
saxatilis, Roccus, 26
saxicola, Sebastes, 40
scabrata, Raja, 7
schoepfi, Alutera, 52
    Ceratocanthus, 52
    Chilomycterus, 52
SCIAENIDAE, 28
scintillans, Aristostomias, iv
scolopaceus, Nemichthys, 18
Scomberesocidae, 19
Scomberesox saurus, 19
Scomber japonicus, 37
    scombrus, 37
    tapeinocephalus, 37
SCOMBRIDAE, 36
scombrus, Scomber, 37
SCOPELARCHIDAE, 14
Scophthalmus aquosus, 49
Scorpaenichthys marmoratus, 44
SCORPAENIDAE, 38
scorpioides, Myoxocephalus, 44
scorpius, Myoxocephalus, 44
SCYLIORHINIDAE, 5
Scytalina cerdale, 35
SCYTALINIDAE, 35
Sebastes, 38, 39
Sebastes aleutianus, 39
    alutus, 38
    auriculatus, iv
    caurinus, 39
    crameri, 39
    dactylopterus, 38
    dallii, 39
    diploproa, 39
    elongatus, 39
    flavidus, 39
    introniger, 39
Sebastes maliger, 39
    marinus, 39
    melanops, 39
    miniatus, 39
    mystinus, 39
    nebulosus, 39
    nigrocinctus, 39
    paucispinis, 40
    pinniger, 40
    proriger, 40
    rosaceus, 40
    ruberrimus, 40
    rubrivinctus, 40
    saxicola, 40
    wilsoni, 40
    zacentrus, 40
Sebastodes, 38, 39
Sebastolobus alascanus, 40
secundodorsalis, Thunnus, 37
Selene vomer, 27
senta, Raja, 7
Seriola zonata, 27
SERRANIDAE, 26
Serrivomer beanii, 18
setapinnis, Vomer, 27
setiger, Dasycottus, 42
sherborni, Rhectogramma, 26

Sicyogaster maendricus, 53
sigalutes, *Gilbertidia*, 45
signata, *Cyclothone*, 13
signatus, *Bathymaster*, 29
silenus, *Zaprora*, 35
silus, *Argentina*, 12
SIMENCHELYIDAE, 18
Simenchelys parasiticus, 18
simillima, *Palometa*, 37
  Peprilus, 37
simonyi, *Benthodesmus*, 36
Siphostoma fuscum, 24
sladeni, *Argyropelecus*, 13
sloani, *Chauliodus*, 14
snyderi, *Oligocottus*, 44
Somniosus microcephalus, 6
  pacificus, 6
sordidus, *Citharichthys*, 49
SPARIDAE, 28
spatula, *Icelus*, 43
Sphoeroides maculatus, 52
Sphyraena argentea, 26
SPHYRAENIDAE, 26
Sphyrna diplana, 5
  zygaena, 5
SPHYRNIDAE, 5
spinicauda, *Raja*, 7
spinosus, *Eumicrotremus*, 47
  Hemilepidotus, 42
Spirinchus dilatus, 12
SQUALIDAE, 5
Squalus acanthias, 6
  suckleyi, 6
stabuliformis, *Raja*, 7
stellatus, *Platichthys*, 51
  Pleuronectes, 51
stelleri, *Hexagrammos*, 40
stellulata, *Raja*, 7
Stenodus leucichthys, 11
  mackenzii, 11
stenolepis, *Hippoglossus*, 50
Stenotomus versicolor, 28
STERNOPTYCHIDAE, 13
Sternoptyx diaphana, 13
STICHAEIDAE, 31
Stichaeus punctatus, 31
stigmaeus, *Citharichthys*, 49
stigma, *Gymnelis*, 34
  Gymnelopsis, 34
  Ophidium, 34
stilbius, *Leuroglossus*, 12
stomias, *Atheresthes*, 49
Stomias boa, 14
  ferox, 14
STOMIATIDAE, 13
Stomioides nicholsi, 14
stoutii, *Eptatretus*, 4
stouti, *Polistotrema*, 4
striata, *Argentina*, 12
STROMATEIDAE, 37
sturio, *Acipenser*, 8
subbifurcata, *Ulvaria*, 31
suckleyi, *Squalus*, 6
SUDIDAE, 14
superciliosus, *Hexagrammos*, 40
swanii, *Bothragonus*, 46
symmetricus, *Trachurus*, 27
SYNAPHOBRANCHIDAE, 18
Synaphobranchus kaupii, 18
  pinnatus, 18
Synchirus gilli, 44
SYNGNATHIDAE, 24
Syngnathus fuscus, 24
  griseolineatus, 24
  peckianus, 24

tabacaria, *Fistularia*, 24
Tactostoma macropus, 14
Taeniotoca lateralis, 29
tapeinocephalus, *Scomber*, 37
Taractes longipinnis, 27
  princeps, 27
Tarletonbeania crenularis, 17
  taylori, 17
Tarpon atlanticus, 8
taurus, *Carcharias*, 5
Tautoga onitis, 29
Tautogolabrus adspersus, 29
taylori, *Asemichthys*, 3, 41
  Radulinus, iv
  Tarletonbeania, 17
tentaculatus, *Mancalias*, 53
tenuis, *Icelinus*, 43
  Urophycis, 22
terraenovae, *Eumicrotremus*, 47
  Lycodes, 34
TETRAGONURIDAE, 37
Tetragonurus cuvieri, 37
Tetranarce californica, 7
TETRODONTIDAE, 52
Thaleichthys pacificus, 12
thazard, *Auxis*, 36
Theragra chalcogrammus, 22
theta, *Diaphus*, 16
thompsoni, *Electrona*, 19
thompsonii, *Cottunculus*, 42
  Triglopsis, 43, 44
THUNNIDAE, 36
Thunnus, 36
Thunnus alalunga, 37
  saliens, 37
  secundodorsalis, 37
  thynnus, 37
thynnus, *Thunnus*, 37
tobianus, *Ammodytes*, 35
tomcod, *Gadus*, 22
  Microgadus, 22
TORPEDINIDAE, 7
Torpedo nobiliana, 7
townsendi, *Ceratoscopelus*, iv
Trachurops crumenophthalmus, 27
Trachurus symmetricus, 27
TRACHYPTERIDAE, 25
Trachypterus rexsalmonorum, 25
transmontanus, *Acipenser*, 8
triacanthus, *Poronotus*, 38

TRICHIURIDAE, 36
TRICHODONTIDAE, 29
trichodon, Trichodon, 29
Trichodon, trichodon, 29
tricuspis, Gymnocanthus, 42
tridentatus, Entosphenus, 4
TRIGLIDAE, 40
Triglops beani, 45
    macellus, 44, 45
    nybelini, 45
    ommatistius, 45
    pingelii, 45
Triglopsis thompsonii, 43, 44
trispinosus, Odontopyxis, 46
trutta, Salmo, 10
TRYGONIDAE, 7
tshawytscha, Oncorhynchus, 10
tullibee, Coregonus, 12
tunicatus, Liparis, 48
turneri, Lycodes, 34
tyrannus, Brevoortia, 9

Ulvaria subbifurcata, 31
uncinatus, Artediellus, 41
unifasciatus, Hyporhamphus, 19
Urophycis chesteri, 20
    chuss, 22
    regius, 22
    tenuis, 22

vacca, Damalichthys, 29
    Rhacochilus, 29
vachonii, Lycodes, 35
vahlii, Lycodes, 35
ventricosus, Cyclopterichthys, 47
verracosa, Occa, 46
verrillii, Lycenchelys, 33
verrucosus, Myoxocephalus, 44
versicolor, Stenotomus, 28
vetulus, Parophrys, 51
villosus, Mallotus, 12
viola, Antimora, 19
violaceus, Escolar, 36
virens, Pollachius, 22
viridis, Gymnelis, 33
volitans, Dactylopterus, 49
vomer, Argyreiosus, 27
    Selene, 27
Vomer setapinnis, 27
vulgaris, Gaidropsarus, 21
    Hippoglossus, 50
vulpes, Albula, 8
vulpinus, Alopias, 4

wheatlandi, Gasterosteus, 24
willoughbyi, Acrotus, 51
wilsoni, Sebastes, 40

Xenodermichthys copei, 15
Xenopyxis latifrons, 46
Xererpes fucorum, 33
Xiphias gladius, 37
XIPHIIDAE, 37
Xiphister atropurpureus, 32
    mucosus, 32

zacentrus, Sebastes, 40
zachirus, Glyptocephalus, 50
Zaniolepis latipinnis, 41
Zaprora silenus, 35
ZAPRORIDAE, 35
ZEIDAE, 26
Zenopsis ocellata, 26
ZOARCIDAE, 33
zonata, Seriola, 27
zonifer, Erilepis, 41
zonope, Jordania, 43
zygaena, Sphyrna, 5
zyopterus, Galeorhinus, 5